Appendix E

Socioeconomic Report

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Socioeconomic Impact Analysis of an Indian-Owned Casino

Calexico, California

February 2005

Submitted by:
Richard A. Parker, Ph.D. and Kimberly Collins

Executive Summary:

Overall Conclusion:

Generally, the proposed casino is found to be a significant potential positive impact upon the local economy, with a minimum of negative offsets. In particular, the wages and benefits that will accrue to the region are substantial and fears of increased crime and pathological gambling problems, among other issues, are not supported by the data.

Project Overview:

The objective of this report is to determine the socioeconomic impacts of a proposed Indian owned casino in the City of Calexico, County of Imperial, State of California. The casino is proposed to be a facility that will cost approximately $175 million to construct. It will be comprised of a 91,000 square foot casino with 130,000 square feet of food/beverage and retail components. There will be a 50,000 square foot banquet/meeting hall, a 10,000 square foot entertainment venue, and a 200 room hotel. The casino will have 2,000 slot machines and 45 gaming tables. There will be 3 guest restaurants and one employee dining room. A swimming pool and a 3,000 guest space--400 valet space parking structure will also be developed. Management of the casino has expressed a desire to create a facility that would be a catalyst for economic development in the region.[1]

The research team was charged with addressing the impact of the casino upon:

- economic development, jobs, and wages and benefits;
- property values;
- sales revenues due to Mexican residents and border crossings;
- the local crime rate;
- infrastructure needs of the City of Calexico;
- labor pool sources;
- health and quality of life for senior citizens; and
- public assistance programs.

Economic Development, Jobs, and Wages and Benefits: [2]

Payroll and Benefits[3]: Estimates are that the Calexico Indian casino resort will employ approximately 2400 persons—95 percent full-time. Twenty percent of the positions will be management/supervisory. The breakdown by department of the 2400 employees is as follows:

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[1] The casino complex will be located in Calexico near the Hwy 111 or Meadows Road Corridor. Any change in the designation of the Preferred Project Sites from that described could have a material impact on the revenue, expense and construction cost projections provided, the extent to which cannot be determined until definitive site designations/assignments have been made.

[2] Project cost estimates are expressed in the year 2005 dollars unless otherwise noted. The capital budget represents the casino operator's best estimate of the overall project cost based on its experience in San Diego County and limited research of the Calexico construction market. Furthermore, the timing of the announced construction projects (hotels, casinos, etc.) coupled with the current demand will have a significant impact on the labor pool and other related services that could directly impact construction costs, the extent to which may not have been adequately estimated.

[3] Certain information included in this analysis contains statements and projections that project future circumstances and conditions. Such projected information involves important uncertainties that could significantly affect anticipated results. These uncertainties include, but are not limited to, those relating to

695 casino employees
280 hotel employees
850 food and beverage employees
575 maintenance, environmental services, I/T, and regulatory
2,400 total[4]

Approximately 1,500 employees are expected to be members of local unions.

Annual payroll is estimated to be $70 million in 2004 dollars (a mean of approximately $30,000 per full-time employee equivalent). Benefits will add another 42 percent, for a total payroll/benefit package of almost $100 million (over $42,000 per full-time equivalent employee). This payroll estimate is generally consistent with other casino data.

Health Insurance Coverage: The percentage of individuals in Imperial County (adults under the age of 65 and children) with private or employer provided health insurance coverage is 44 percent. Approximately 34 percent utilize Medicaid/MediCal, 6 percent utilize other public services and programs, and 16 percent have no medical care or coverage at all. These numbers indicate a very low rate of employer provided health care coverage and a very high rate of public health care; therefore, it is clearly the case that Imperial County residents are in need of quality jobs that can provide health insurance for themselves and their families.

Direct Purchases of Good and Services: Casinos also spend considerable sums on purchases of goods and services both locally and from outside the area from regional and national vendors. The pattern and amount of such spending for the Calexico Indian casino is not known at present; however, data from other casinos are informative, with total expenditures ranging between 68 percent of wages (Connecticut) and 150 percent (Arizona). Much of this difference is due to the varying magnitudes and components of the casino developments in these states. Additionally, local spending for goods and services ranges from 12 percent of payroll (near the Connecticut Foxwoods casino) to 28 percent (Kansas statewide).

It is reasonable, therefore, to conclude that spending for the Calexico casino will likely approximate 75 percent of salaries and wages, with 5-10 percent captured locally until suppliers and services can evolve in Imperial County, which is very much underdeveloped. That is to say,

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development and construction activities, domestic and global economic conditions, activities of competitors and the presence of new or additional competition, and fluctuations and changes in customer preferences and attitudes.

[4] The casino complex will open with substantially all material components (i.e., casino, room, food and beverage outlets, etc.) operational. Information provided with respect to number of employees, job titles/classifications, salaries and wages and benefits are general estimates and assume all operations/amenities are owned by the casino itself and operated by Viejas Enterprises. It is the intention of the casino operator to outsource certain aspects of the project including, but not limited to, some restaurants and retail outlets to well-recognized, reputable, specialty retailers and restaurateurs. Although the information provided may be representative for these facilities, certain changes may be required. In addition, information presented as it relates to number of employees assumes certain business volumes/demands which may or may not be achieved. Furthermore, collective bargaining agreements could impact the data provided, the extent of which may not be properly reflected. As a further note, job titles and/or departmental classifications are general in nature and are not necessarily representative of financial statement classifications.

in addition to the $70 million in payroll, an additional $4 million in local goods and services can conservatively be expected to be added to the local economy directly from casino operations.

Substitution: The Calexico casino can be expected to demonstrate relatively minimal substitution effects—likely almost zero within Calexico and maybe up to 10 percent in Imperial County. As such, new payroll can be reduced by 10 percent from $70 million to $63 million and spending on local goods and services to $3.5 million to account for the 10 percent substitution effect. These reductions represent the transfer of salaries out of those industries that do suffer some substitution and into the new jobs at the casino and casino-related businesses.

Further, it is estimated that 300 of the 2,400 employees will cross the border from Mexicali thereby removing a certain percentage of these earnings from the Imperial County economy. It is estimated that 900 of the 2,400 employees to be hired by the Calexico casino will potentially be currently unemployed local residents, with the balance to transfer from elsewhere. It is not unreasonable to estimate that at least 300 of these 900 local residents will cross the border from Mexicali to perform their jobs.

This movement of payroll to Mexicali residents creates some leakage from the Imperial County economy that should also reduce the estimated wage impact. Taxes withheld will remain in the United States and Mexicali residents are known to spend approximately 21 percent of their family income in the United States. Between taxes withheld and spending captured, approximately 50 percent of Mexicali payroll will stay and 50 percent will leak to Mexico.

Direct Wage, Non-Wage, and Patron Benefits to Imperial County from Calexico Indian Casino Operations

Net New Wages and Salaries	**$57.4 million**
Net New Casino Non-Wage Expenditures	**$3.5 million**
Spending and Taxes Retained from Mexicali Employees	**$2.8 million**
TOTAL BENEFITS	**$63.7 million**

Direct Job Generation to Imperial County from Calexico Indian Casino Operations

Net New Casino Jobs (5% part-time)—90% new less 300 Mexicali residents	**1,806**
Net New Jobs from Casino Purchases	**120**
TOTAL NEW JOBS	**1,926**

Indirect Economic Effects—The Multiplier: The casino will have both direct and indirect effects upon an area's income and jobs. The direct effects of a casino are those benefits described above—income, employment, and spending associated with providing goods and services to the casino patrons. Indirect effects refer to the secondary impacts that a casino might have on the community.

Based upon information from other casino regions, it is reasonable to assume that a 1.75 Multiplier will be experienced in Imperial County and that the county will benefit annually from casino operations to the extent of $111.5 million and approximately 3,370 net new jobs.

Direct and Indirect Wage, Non-Wage, and Patron Benefits to Imperial County from Calexico Indian Casino Operations

Direct Benefits	**$63.7 million**
Multiplier (1.75)	**$47.8 million**
TOTAL	**$111.5 million**

Direct and Indirect Job Generation to Imperial County from Calexico Indian Casino Operations

Direct New Jobs	**1,926**
Multiplier (1.75)	**1,444**
TOTAL NEW JOBS	**3,370**

Construction Costs: It is likely that the most that will accrue to resident labor in the region from casino construction jobs would be in the range of 15-25 percent at best or $3 to 5 million. This equals approximately 40-70 full-time annual jobs at $30,000 annually per full-time job equivalent, assuming 30 months for construction, with approximately 10-20 such jobs being allocated to Mexicali residents—or $1 to 2 million.[5] Again, one-half of the payroll for Mexicali workers will be captured in the United States, indicating that up to $1 million of Mexicali construction payroll will remain for the benefit of the Calexico and Imperial County economies.

There will be $15-17 million in construction payroll that will compensate those construction workers who temporarily transfer to Imperial County in order to perform this construction work. Although some of these workers may be footloose, most will have homes and families elsewhere. As such, the payroll that they receive will, in part, be sent out of the county immediately. Assuming that one-third to one-half of their compensation stays in Imperial County to cover their

[5] It has been estimated that the casino complex will have a development period of approximately thirty (30) months once all local, state, and federal government approvals are received.

living expenses, another $5-8 million will benefit the local economy for the two construction years for these approximately 140 full-time worker annual equivalents (based upon an average annual income of $45,000). Construction labor multipliers are similar to the multipliers for operations in that both are from labor services. Adding $1 to 2 million of local fees and planning services to the $3 to 4 million local construction labor (including captured Mexicali payroll) and $5 to 8 million for temporarily relocated construction workers and then applying the 1.75 Multiplier utilized above, yields approximately $15-25 million one-time economic benefits and somewhat in excess of 350 annual (full-time equivalents) short-term jobs that will occur in Imperial County during the construction of the Calexico Indian casino—a total of 875 annual jobs for the 30 month construction period.

Property Values:

A conservative estimate of increases would hold that commercial and industrial land closer to the casino, which would include Calexico and much of El Centro, will increase by a rate between 25 percent and 200 percent faster than the rest of Imperial County. Therefore, if commercial and industrial land in the county grows in value by 5 percent, such land closer to the casino can be expected to grow in value by double that amount—10 percent or possibly even more. It can also be expected that residential property closer to the casino will also increase relative to the rest of the county by a rate up to 20 percent faster.

Sales Revenue from Border Crossings:

It is concluded that border crossings associated with the casino will not provide significant impact to Calexico and Imperial County beyond those already in existence and those other impacts factored into the employment benefits previously discussed.

Crime:

Gambling is feared to increase problem and pathological gambling, thereby encouraging illegal acts by those impacted in order to finance their problem, by making the supply of the addictive product more readily available. Casinos are also thought to increase the ease of identifying criminal opportunities in that more vulnerable visitors and seniors are attracted to casinos and considerable amount of cash is carried into and out of them. Gambling is also thought to attract less desirable forms of economic development—pawnshops and escort services, in particular. Further, gambling, with its high demand for unskilled labor, is often accused of attracting an employee base that is more prone to crime.

These fears do have a certain theoretical logic that causes residents to frequently oppose the introduction of gambling into their communities; however, this theoretical logic fails to emerge as proven in the vast majority of studies that have been undertaken. The alleged relationship between casinos, especially Indian casinos, and street crime, along with problem gambling, and organized crime are fears that are not supported by facts. Crime is not an issue that should cause any significant rethinking of public policy as it applies to the development of an Indian casino in Calexico.

Organized Crime: The vast majority of studies performed by universities and governments indicate that there has been no significant presence of organized crime in the gambling industry since the 1970s when regulatory authorities took a stronger role in licensing and supervising the industry.

Problem and Pathological Gambling: The association between problem and pathological gambling, although less unanimous than the organized crime issue, also tends to render the fears of increased problems due to casinos to be substantially unfounded.

Reports citing little, if any, effect are typically larger scale studies performed or endorsed by nationally prominent gambling experts and scholars. The more negative studies are very small and somewhat selective.

This report concludes that the population of problem gamblers is a relatively small subset of the total population and that there is only a relatively small amount of anecdotal evidence that their problems lead to increased crime.

Street Crime: Existing studies offer conflicting information and conclusions in some cases but also certain consistencies that allow some degree of summary analysis. Crime increases due to casinos are not at all certain. They may occur in some areas but will not in others. Crime rate increases are least likely to occur in lower income, populated areas, such as Calexico and are, in fact, likely to decline because of the increased economic benefits that will accrue to the area. To the extent that crimes do increase, the increase will not be large and it will be entirely in non-violent crimes such as auto theft, larceny, and robbery. Indian casinos do not increase crimes as much as non-Indian casinos, and whatever the increase that might occur, would occur in any event for any development that attracts substantial economic activity.

City Infrastructure:

Overall, the casino is seen as a positive economic development project for Calexico by city staff. Economic development has historically been based primarily on the development of residential housing units in the community. Residential development, though it brings initial funding into the city, makes it difficult to sustain growth and provide quality services to the residents. Therefore, those interviewed felt that the casino would benefit the local residents by providing entertainment facilities, employment, and needed tax dollars to the community, with most infrastructural considerations satisfied by existing capacity or by plans that have been already adopted prior to the casino proposal.

Labor Pool:

Calexico and Imperial County do have a vast supply of available workers who are very low skilled and frequently troubled by drug and alcohol problems that cause them to be poor candidates for employment.

In order to take maximum advantage of the 3,370 net new permanent full-time jobs to be created in the region, training programs will be vital in not only skills but in behavioral issues, including addiction problems. The opportunity is substantial to make significant inroads into what have been long standing and enormous unemployment, skills, and behavioral deficiencies within the local labor force in Imperial County, generally, and Calexico, in particular.

Public Assistance:

Approximately 600 local residents may be removed from the unemployment rolls because of the net new casino, supplier, and spin-off jobs (18 percent of all net new employees, including the Multiplier) of whom 225 can be expected to no longer need the TANF program.

Health and Quality of Life for Senior Citizens:

Most studies that have some statistical basis, in contrast to anecdotes, indicate that the majority of senior gamblers do not have more of a problem with compulsive gambling than does the general population. Generally a 1 to 6 percent rate of problem or pathological gamblers has been demonstrated depending upon the study and severity of the measure used to identify the disorder.

Although not out of proportion to their population size, that percentage of seniors that might have gambling problems should not be ignored. Seniors are less resilient than the general population in that they are more often living on limited and fixed incomes and have health needs that can impose significant costs upon that income. They, therefore, may be less able to afford the gambling losses than is the general population.

What exists, therefore, is a mixed finding. First, seniors appear to be not significantly different and no more susceptible than the general public to compulsive gambling. On the other hand, the unique needs of the senior population make whatever difficulties do exist more problematic.

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Socioeconomic Impact Analysis of an Indian-Owned Casino in Calexico, California

February, 2005

Submitted by Richard A. Parker, Ph.D. and Kimberly Collins

Introduction:

Project Overview:

Richard A. Parker (Department of Public Administration and Urban Studies, San Diego State University and President, Rea & Parker Research) and Kimberly Collins (Director, California Center for Border and Regional Economic Studies, San Diego State University) have prepared this report in order to determine the socioeconomic impacts of a proposed Indian owned casino in the City of Calexico, County of Imperial, State of California. The Calexico casino project is expected to hire 2,400 employees of which 95% would be full-time. The Indian casino in Calexico is proposed to be a facility that will cost approximately $175 million to construct. It will be comprised of a 91,000 square foot casino with 130,000 square feet of food/beverage and retail components. There will be a 50,000 square foot banquet/meeting hall, a 10,000 square foot entertainment venue, and a 200 room hotel. The casino will have 2,000 slot machines and 45 gaming tables. There will be 3 guest restaurants and one employee dining room. A swimming pool and a 3,000 guest space--400 valet space parking structure will also be developed. It is planned that the casino will be open 365 days per year and 24 hours each day.[1]

The development would be part of a regional area that encompasses a small number of lightly populated cities in the United States and a large metropolitan area in Mexico. Management of the casino has expressed a desire to create a facility that would be a catalyst for economic development in the region. It is working to develop a singularly distinctive facility that is an integral part of the cultural and recreational fabric of the community.

The research team was charged with addressing the impact of the casino upon:

- economic development, jobs, and wages and benefits;

[1] The casino complex will be located in Calexico near the Hwy 111 or Meadows Road Corridor. Any change in the designation of the Preferred Project Sites from that described could have a material impact on the revenue, expense and construction cost projections provided, the extent to which cannot be determined until definitive site designations/assignments have been made.

- property values;
- sales revenues due to Mexican residents and border crossings;
- the local crime rate;
- infrastructure needs of the City of Calexico;
- labor pool sources;
- health and quality of life for senior citizens; and
- public assistance programs.

In defining and researching these tasks, the project team conducted independent research and reviewed studies regarding Indian gaming in other parts of the United States and applied these to the Calexico Indian casino. Interviews were conducted with Calexico and Imperial County officials and experts concerning issues surrounding employment and crime in the region.

Regional Overview:

Calexico, Imperial County is a small city in the southeastern portion of the California desert region bordering Mexico. In 2000, it had a population of 27,109 with 95.3% of its residents classifying themselves as Hispanic. Even though the population of Calexico puts it in the ranks of a small city, it borders Mexicali, a large metropolitan city in Mexico. The Municipality of Mexicali has a population of approximately 850,000 people---600,000 in the urban center and 250,000 in the rural areas. The twin cities of Calexico and Mexicali share retail shopping, restaurants and entertainment centers as well as language and culture. The workforce of the two cities flows back and forth across the border, using their skills where the labor market demands.

Calexico has lower median household and family incomes than does Imperial County, which is also relatively low in relation to the state. Both also have high rates of children living in poverty. Much of this poverty is due to very high unemployment rates, particularly in Calexico. The majority of Calexico employment is in the government sector (mainly education), retail, agricultural, transportation logistics, and services sector. Notably, only a small percentage (7 percent) of residents is employed in construction in Calexico. Three times as many individuals are employed in the service sector.

Table 1 provides a brief look at the demographics and economics of Calexico and Imperial County.

Table 1

Population and Economic Comparison, 2000

	Calexico	Imperial County
Total population	27,109	142,361
Population 16 and over	18,755	102,881
Percent Hispanic	95.3%	72.2%
Unemployment rate (2003 annual average)	21.9%	19.4%
Median household income	$28,929	$31,870
Median family income	$30,277	$35,226
Per capita income	$9,981	$13,239
Median Male Earnings	$27,712	$32,775
Median Female Earnings	$18,857	$32,974
Families living in poverty	22.6%	19.4%
Children in poverty	30.8%	28.7%
Percent that Work in Construction	6.9%	9.0%
Percent that Work in Services	18.8%	19.7%

Source: U.S. Census, 2000 and California Employment Development Department, Labor Market Information Division, 2004.

Health Insurance Coverage:

The percentage of individuals in Imperial County (adults under the age of 65 and children) with private or employer provided health insurance coverage is 44 percent. Approximately 34 percent utilize Medicaid/MediCal, 6 percent utilize other public services and programs, and 16 percent have no medical care or coverage at all (*California Health Interview Survey, 2003-- UCLA Center for Health Policy Research).* These numbers indicate a very low rate of employer provided health care coverage and a very high rate of public health care; therefore, it is clearly the case that Imperial County residents are in need of quality jobs that can provide health insurance for themselves and their families.

Wages and Flexible Shifts:

Table 2 shows that the average entry level hourly wage for all occupations in Imperial County is $7.52. The mean hourly wage in the County is $15.73 for all occupations and the mean annual wage is $32,716.

Restaurant related industries have a lower hourly entry level wage at $7.01, the mean hourly wage is $8.57, and the mean annual wage is $17,838. The mean annual wages vary within the food service and preparation sector, depending upon classification, $14,493 (Hosts and Hostesses in a Restaurant, Lounge or Coffee Shop) to $27,987 (Cafeteria and Institution Cooks).

Building and grounds cleaning occupations have a slightly higher pay scale than food preparation and serving occupations, but it is still lower than for all occupations in Imperial County. The mean annual wage is $22,003 for building and grounds cleaning and maintenance occupations; the mean hourly wage is $10.58, and the entry level hourly is $7.27. The range of mean wages in this sector is from $16,960 (Maids and Housekeeping Cleaners) to $38,858 (Supervisors of Maids and Janitors).

Flexible shift data for Imperial County is not specifically gathered as its own category. However, it is clear that workers in two of the industries discussed above (Food Preparation and Serving/ Building and Grounds Cleaning) must be prepared to work shifts that are non-traditional. Frequently, hospitality workers are students, who are younger with little work experience (Bureau of Labor Statistics, U.S. Department of Labor, *Career Guide to Industries, 2004-05 Edition*, Food Services and Drinking Places). These type of workers need to have more flexible shifts in order to conduct the other activities in their lives. Flexible shifts also are preferred by many younger workers with children so that child care can be provided by the different members of the household.

As such, the 4,220 workers in these categories in Imperial County are certainly ones who are available to work flexible shifts. It is also not unreasonable to assume that at least one-half of the base number of unemployed in the county (10,000—see discussion in Task 12—Public Assistance Programs) would be available for flexible shifts. Therefore, it would appear that more than 9,200 workers in Imperial County can be identified as potential flexible shift workers. This represents 15 percent of the total Imperial Valley labor force.

Table 2

Imperial County Occupational Employment (2003) & Wage (2004) Data
Hospitality and Restaurant Workers Wages

SOC Code	Occupational Title	2003 Employment Estimates	2004 Wages: Entry-Level Hourly Wage (1)	Mean Hourly Wage	Mean Annual Wage	Mean Relative Standard Error (4)	25th Percentile Hourly Wage	50th Percentile (Median) Hourly Wage	75th Percentile Hourly Wage
00-0000	Total all occupations	47,740	$7.52	$15.73	$32,716	4.08	$7.96	$11.96	$20.83
35-0000	Food Preparation and Serving-Related Occupations	2,770	$7.01	$8.57	$17,838	1.83	$7.01	$7.32	$8.77
35-1012	First-Line Supervisors/Managers of Food Preparation and Serving Workers	200	$9.29	$12.95	$26,940	4.37	$10.12	$12.34	$14.63
35-2011	Cooks, Fast Food	(3)	$7.18	$7.72	$16,058	2.34	$7.09	$7.71	$8.34
35-2012	Cooks, Institution and Cafeteria	140	$8.80	$13.46	$27,987	3.61	$9.77	$12.58	$18.09
35-2014	Cooks, Restaurant	190	$7.28	$8.71	$18,099	3.76	$7.25	$8.56	$10.04
35-2015	Cooks, Short Order	(3)	$7.10	$7.44	$15,463	4.84	$6.99	$7.15	$7.32
35-2021	Food Preparation Workers	130	$6.97	$8.51	$17,718	3.28	$6.97	$7.09	$9.43
35-3011	Bartenders	220	$7.81	$8.05	$16,746	2.93	$7.55	$8.05	$8.55
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	720	$7.05	$7.42	$15,420	2.41	$6.99	$7.16	$7.45
35-3022	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	220	$7.08	$10.47	$21,782	2.96	$7.18	$10.27	$12.89
35-3031	Waiters and Waitresses	260	$6.97	$6.98	$14,515	2.1	$6.91	$6.97	$7.04
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	210	$7.04	$7.53	$15,657	3.07	$6.98	$7.14	$7.91
35-9021	Dishwashers	100	$6.97	$7.41	$15,414	2.14	$6.95	$7.06	$7.77
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	60	$6.97	$6.97	$14,493	2.63	$6.90	$6.97	$7.03
37-0000	Building and Grounds Cleaning and Maintenance Occupations	1,450	$7.27	$10.58	$22,003	3.84	$7.22	$8.79	$13.18
37-1011	First-Line Supervisors/Managers of Housekeeping and Janitorial Workers	40	$12.10	$18.68	$38,858	4.95	$14.65	$17.55	$22.72
37-1012	First-Line Supervisors/Managers of Landscaping, Lawn Service, and Groundskeeping Workers	30	$11.99	$18.25	$37,960	6.09	$14.66	$17.03	$22.14
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	750	$7.12	$10.10	$20,999	5.79	$7.07	$8.59	$12.64
37-2012	Maids and Housekeeping Cleaners	180	$7.17	$8.16	$16,960	2.11	$7.11	$7.93	$8.80
37-3011	Landscaping and Groundskeeping Workers	450	$7.33	$10.62	$22,100	5.2	$7.33	$8.83	$13.49

Source: California Employment Development Department, 2004.

Data Footnotes:

(1) The mean of the first third of the wage distribution is provided as a proxy for entry-level wage.

(2) For some occupations, workers may not work full-time all year-round. For these occupations it is not feasible to calculate an hourly wage.

(3) An estimate of employment could not be provided.

(4) The "Mean Relative Standard Error" is a measure of the relative precision of the wage estimate. A low number denotes relatively high validity.

Tasks 1-4: Economic Development, Jobs, Wages, and Benefits:

On-Going Operations:

Payroll and Benefits[2]: Estimates are that the Calexico Indian casino resort will employ approximately 2400 persons—95 percent full-time. Twenty percent of the positions will be management/supervisorial. The breakdown by department of the 2400 employees is as follows:

695 casino employees
280 hotel employees
850 food and beverage employees
575 maintenance, environmental services, I/T, and regulatory
2,400 total[3]

Approximately 1,500 employees are expected to be members of local unions.

Annual payroll is estimated to be $70 million in 2004 dollars (a mean of approximately $30,000 per full-time employee equivalent). Benefits will add another 42 percent, for a total payroll/benefit package of almost $100 million (over $42,000 per full-time equivalent employee).

This payroll estimate is generally consistent with other casino data:

- Foxwoods Resort Casino in Connecticut employs 12,934 persons—9,757 from Connecticut—7,845 from the immediate county, which is much smaller geographically than Imperial County. The related hotel employs an additional 797 people for a total of 13,931 employees (258 from the immediate county). All employees are covered by comprehensive health insurance. The mean pay per employment unit was estimated to reach $29,000 in 2004—consistent with the Calexico estimate (Fred Carston, Director of the Connecticut Center for Economic Analysis at the University of Connecticut, along

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[3] The casino complex will open with substantially all material components (i.e., casino, room, food and beverage outlets, etc.) operational. Information provided with respect to number of employees, job titles/classifications, salaries and wages and benefits are general estimates and assume all operations/amenities are owned by the casino itself and operated by Viejas Enterprises. It is the intention of the casino operator to outsource certain aspects of the project including, but not limited to, some restaurants and retail outlets to well-recognized, reputable, specialty retailers and restaurateurs. Although the information provided may be representative for these facilities, certain changes may be required. In addition, information presented as it relates to number of employees assumes certain business volumes/demands which may or may not be achieved. Furthermore, collective bargaining agreements could impact the data provided, the extent of which may not be properly reflected. As a further note, job titles and/or departmental classifications are general in nature and are not necessarily representative of financial statement classifications.

with other University of Connecticut staff—William Lott, Director of Research, and Stan McMillen, Bobur Alimov, Na Li Dawson, and Tapas Ray, *The Economic Impact of the Mashantucket Pequot Tribal Nation Operations in Connecticut* (2000)).

- Wages and benefits for the 937 employees of the Harrah's Prairie Band Casino in Kansas totaled $17.8 million and $4.5 million, respectively, in 2001—or $19,000 of personal income per full and part time employee; $24,000 including benefits (Mark Seitz and David Darling of Kansas State University *The Role of Harrah's Prairie Band Casino Property in the Area Economy*—2003). These numbers are lower than estimated for Calexico; however, there are three factors that render them more comparable than would initially appear:
    - Kansas is a weaker union state than California and is a lower income state;
    - Income includes both full and part time employees without adjustment into full-time employment units, and;
    - Data is from 2001 in contrast to 2004.
- The Minnesota Indian Gaming Commission, which represents 9 of 11 tribes in the state, testified to the state legislature that in 2000 casinos generated 14,000 direct jobs and $250 million in payroll ($18,000 per full and part time employee)--Douglas Clement, writing for the Federal Reserve Bank of Minneapolis in 2003 (*Milking the New Buffalo*).
- Amy Lake and Steven Deller of the University of Wisconsin (*The Socioeconomic Impacts of a Native American Casino* (1996)) report that the undisclosed Wisconsin Indian casino about which they wrote employed 870 employees and paid $14 million in wages and salaries ($16,000 per full and part time employee in 1995).

Direct Purchases of Good and Services: Casinos also spend considerable sums on purchases of goods and services both locally and from outside the area from regional and national vendors. Harrah's Prairie Band Casino, for instance, spent over $5 million with Kansas vendors in 2002 (28 percent of total salaries) according to Seitz and Darling (2003). Minnesota Indian casinos spent $187 million nationally in 2000 (75 percent of salaries according to Clement (2003)).

Foxwoods Resort Casino and hotel spent $260 million on such purchases in 1999—$112 million of which was spent with Connecticut vendors and $48 million with local county vendors (Carston, Lott, McMillen, Alimov, Dawson, and Ray (2000)). These purchases translate into total purchases equal to 64 percent of salaries and wages—27 percent within the state of Connecticut and 12 percent locally.

Indian casinos in Arizona spent $279 million in 2000 on vendors and regulatory services (Stephen Cornell and Jonathan Taylor of the Udall Center for Studies in Public Policy, University of Arizona--*An Analysis of the Economic Impacts of Indian Gaming in the State of Arizona*-2001). The total amount of salaries and wages is not indicated in this report; however, assuming $20,000 per employee for the 9,324 employees in 2000, this level of spending would represent 150 percent of payroll. Jobs created by local spending on goods and services for the Wisconsin

Indian casino support an additional 137 jobs (Lake and Deller, 1996), which equates to 16 percent of the total number of casino employees.

The pattern and amount of such spending for the Calexico Indian casino is not known at present; however, these data from other casinos are informative, with total expenditures ranging between 68 percent (Connecticut) and 150 percent (Arizona), much of which spread is due to the different magnitudes and components of the developments. Local spending ranges from 12 percent (Connecticut) to 28 percent (Kansas statewide). In the extreme, Cheryl King and Casey Kanzler of Evergreen State College in Washington State (*Background to a Dream*, 2002) indicate that "a national study found that Tribal enterprises obtain at least 90% of their goods, supplies, and services within the state (New Mexico Gaming Association, 1993)."

It is reasonable, therefore, to conclude that spending for the Calexico casino will likely approximate 75 percent of salaries and wages, with 5-10 percent captured locally until suppliers and services can evolve in Imperial County, which is very much underdeveloped. That is to say, in addition to the $70 million in payroll, an additional $4 million in local goods and services can conservatively be expected to be added to the local economy directly from casino operations.

The Substitution Effect: The popular term for what economists have long called the "Substitution Effect" is "Cannibalization." As the new terminology so colorfully indicates, this refers to the diversion of funds from other consumer goods and services to wagering and gaming. Critics of gaming often use this to argue that intra-industry cannibalization of related industries such as restaurants and other recreational establishments or a reduction of the amount of money spent on groceries due to gambling losses means that not all new jobs and spending created by the casino are actually new but instead are substitutes for or transfers from existing spending and jobs already present in the local economy.

According to gaming opponents, for example, the number of restaurants in Atlantic City declined from 243 in 1977, when casino gambling was legalized, to 146 in 1987, largely attributed to inexpensive meals at the casinos (State of Hawaii Department of Business, Economic Development, and Tourism, *The Economic Impacts of Shipboard Gaming and Pari-Mutuel Horse Racing in Hawaii,* (1997)). There are flaws with this kind of simple analysis. For instance, if meals are less expensive at casinos, then consumers, by switching to those meals, will be able to

retain more disposable income and might spend that income in a number of ways unrelated to the local restaurants but in such a manner that spending and jobs are retained locally in other industries. Making this determination is difficult. Over time the amount of increased or decreased disposable income will depend upon may factors, including the availability of alternative spending opportunities, the extent of visitor patronage, and if the economy is at full employment. The Hawaii report further noted: "As purported by a University of South Dakota 1991 study on South Dakota gaming, other businesses supported by discretionary income (e.g. apparel and accessories, furniture stores, business services, and recreation services) suffered declines in business sales after gaming was introduced. These studies, however, are suspect because they only show an association with gaming and were not able to establish a causal relationship."

Other valuable input from various studies is as follows:

- Adam Rose of Pennsylvania State University in a 1998 study for the National Gambling Impact Study Commission, *The Regional Economic Impacts of Casino Gambling,* wrote: "While there are claims that this [cannibalization] can be 100 percent or more, there are no empirical studies to support such a conclusion....The evidence varies widely and is difficult to verify. Thus it is hard to draw conclusions here. Thompson, et al. found only a 30 percent substitution rate with respect to a small local area. Thalheimer (1992) estimated casino substitution effect for horse racing in Maryland at 25 percent, while RCF (1993), in a well-designed study, estimated only a 4 percent substitution effect for the Chicago area. Estimates of lottery spending displacement vary widely, with studies ...indicating little or no substitution. The preponderance of evidence is thus toward a low substitution effect."
- Just as Imperial County gambling money moves to Yuma and San Diego County, "Massachusetts residents make up a significant percentage of the patronage of Connecticut casinos...roughly one-third of the patronage of the Connecticut casinos originate from Massachusetts (Jonathan Taylor, along with Joseph Kalt and Kenneth Grant of Harvard University—*Public Policy Analysis of Indian Gaming in Massachusetts* (2002)). This would support a conclusion that the spending in Calexico would be largely new spending.
- John W. Kindt (University of Illinois), *Business-Economic Impacts of Licensed Casino gambling in West Virginia* (1998) quotes Thompson, Gazel, and Rickman (1995) that "More than 10 percent of the locals would spend more on groceries if it were not for the casino, while nearly one-fourth would spend more on clothes. Thirty-seven percent said that their savings had been reduced since the casino [Wisconsin] opened."
- Jonathan Taylor, with Matthew Kreps, and Patrick Wang of Harvard University report in *The National Evidence on the Socioeconomic Impacts of American Indian Gaming on Non-Indian Communities* (2000) that Indian casinos do decrease earnings in the local restaurant and bar industry by 9 percent, but they increase recreational industry earnings by 17 percent and general merchandise earnings by 10 percent. What is indicated is a pattern of "distinguishable Indian effects consistent with the notion that destination effects more than offset substitution and cannibalization effects for off-reservation communities outside of large markets...Casinos introduced into rural and generally poorer locations are likely to perpetrate net positive effects as destination effects swamp substitution and cannibalization effects..."

In the case of Calexico and Imperial Valley, the closest casinos are 45 minutes away in Yuma, Arizona (which rests on the border with California and Imperial County, has a California/Imperial County component, but benefits Yuma to almost its full extent), 60 minutes away in San Diego County (which does have some Imperial Valley employees), and even farther away in the Coachella Valley area of Riverside County, where a great many Indian casinos are present. There has been some local opposition to an Indian casino that has been expressed within Calexico based, in part, upon certain anecdotes of substitutions that are rumored to have occurred in the Coachella Valley due to a transfer of spending out of general merchandise and into casino gambling. No doubt some substitutions do occur, as they would if new golf courses, new shopping centers, or any of many types of new outlets for entertainment or retail purchases were to become available to residents and visitors. It is noteworthy, however, that even to the extent that these anecdotes are true, University of California, Los Angeles economists have predicted substantial economically successful years upcoming in the Coachella Valley (Lou Hirsh, *Economists Predict Booming Year in Valley*, The Desert Sun, September 13, 2004).

- The Coachella Valley's economy is likely to continue to grow thanks in large part to aging baby boomers looking to retire in a place with good weather, a high quality of life and many recreational opportunities.
- Demographic trends should keep long-term growth relatively strong in places like the Coachella Valley, even if a national recession in coming years causes consumers to pull back on spending.
- The valley will continue to benefit from a relatively strong housing market and the Inland Empire's role as one of the state's top job creators.

Stories of individual dislocations, although potentially discomforting, should not be used in any meaningful context to offset the overwhelming evidence of economic benefits and minimal substitutions due to Indian casinos.

The number of entertainment facilities in Imperial County is very limited, with the county's first major regional shopping center now being built 10 minutes away from Calexico in El Centro. The Calexico casino, therefore, can be expected to demonstrate relatively minimal substitution effects—likely almost zero within Calexico and maybe up to 10 percent in Imperial County. As such, new payroll can be reduced by 10 percent from $70 million to $63 million and spending on local goods and services to $3.5 million to account for the 10 percent substitution effect. These reductions represent the transfer of salaries out of those industries that do suffer some substitution and into the new jobs at the casino and casino-related businesses.

Further, it is estimated that 300 of the 2,400 employees will cross the border from Mexicali thereby removing a certain percentage of these earnings from the Imperial County economy. Tasks 10 and 12 estimate that 900 of the 2,400 employees to be hired by the Calexico casino will potentially be currently unemployed local residents, with the balance to transfer from elsewhere. It is not unreasonable to estimate that at least 300 of these 900 will cross the border from Mexicali to perform their jobs. Currently, of the 170,000 person Mexicali workforce, 12,000 jobs are lost to the United States (Tasks 6-7). These 12,000 equal approximately 20 percent of the Imperial County workforce. Therefore, it can be initially projected that 20% of the 900 (180 employees) would be from Mexicali; however, it can be expected that there will be more casino workers than this 20 percent who will commute from Mexicali because of Calexico's proximity to the border and because of the technological advantage that Mexicali workers possess over Calexcio workers. There three major universities in Mexicali that offer engineering and computer science courses. In Imperial County, San Diego State University does not have a computer science program and Imperial Valley Community College, along with some workforce development organizations, only offers very basic entry-level technology courses.

As such, one-third of the 900 jobs are assumed to be devoted to workers from Mexicali who will perform dominantly in maintenance and technology jobs. Mexicali workers, therefore, are estimated to comprise approximately 50 percent of these two job categories. These workers are scheduled in the Communications Workers of America/Viejas Enterprises labor contract to earn approximately $9 per hour—or $5.6 million per year for the 300 workers.

This movement of $5.6 million to Mexicali residents creates some leakage from the Imperial County economy that should also reduce the estimated wage impact. Taxes withheld will remain in the United States and Mexicali residents are shown in Tasks 6-7 to spend approximately 21 percent of their family income in the United States. Between taxes withheld and spending captured, approximately 50 percent of the $5.6 million ($2.8 million) will stay and 50 percent will leak to Mexico.

Therefore, the $63 million that remains after the substitution effect is further reduced by $5.6 million of payroll to Mexicali workers but is supplemented by $2.8 million in spending and taxes that stay and return. Further, adding $3.5 million in casino spending on local goods and services allows and estimate that the direct impact of the casino will be $63.7 million to the Calexico and

Imperial County economies and approximately 1,926 direct new full-time jobs (2,340 full-time equivalent jobs projected less 10% substitution = 2,106 and less 300 Mexicali employees plus $3.5 million purchases = 120 jobs).

Table 3

Direct Wage, Non-Wage, and Patron Benefits to Imperial County from Calexico Indian Casino Operations

Net New Wages and Salaries	**$57.4 million**
Net New Casino Non-Wage Expenditures	**$3.5 million**
Spending and Taxes Retained from Mexicali Employees	**$2.8 million**
TOTAL BENEFITS	**$63.7 million**

Table 4

Direct Job Generation to Imperial County from Calexico Indian Casino Operations

Net New Casino Jobs (5% part-time)—90% new less 300 Mexicali residents	**1,806**
Net New Jobs from Casino Purchases	**120**
TOTAL NEW JOBS	**1,926**

Indirect Economic Effects—The Multiplier: A casino will have both direct and indirect effects upon an area's income and jobs. The direct effects of a casino are those benefits described above—income, employment, and spending associated with providing goods and services to the casino patrons. Indirect effects refer to the secondary impacts that a casino might have on the community. For example, visitors may purchase gasoline from a local gasoline station or casino employees will spend their paychecks in the local community causing more employment for gasoline stations, grocery stores, general merchandise retailers, and so forth. The ripple effect of the spending and re-spending of direct income within an economy is known as the Multiplier. The Multiplier is larger the more that the population spends out of each additional dollar that it receives (the Marginal Propensity to Consume), which is the case in lower income populations. It is also the case that the Multiplier is larger the more self contained is the local economy. That is, the less leakage of income that goes to other regions, the higher will be the Multiplier. As a

lower income region, Imperial County would have a higher Marginal Propensity to Consume and, therefore, a higher Multiplier; however, as a relatively under-developed economy, there is much leakage from Imperial County to San Diego, Yuma, and the Palm Springs areas, although the new regional mall will likely help in this regard.

The most common approach to estimating indirect effects is using an input-output model. Such models evaluate economic effects by measuring the indirect ripple effect of a change in an area's economy. Input-output models recognize that outputs of one industry are often inputs in another and that wages that employees of one industry earn are spent on a variety of goods produced in other industries. Thus, changes in the activity of one industry, like a casino, affect both the casino employees and suppliers and the overall economy itself. RIMS, developed by the U.S. Department of Commerce, and IMPLAN (Minnesota IMPLAN Group) are two of the most widely used input-output models. Once adjustments have been made for substitution effects, the regional multiplier can be applied to the direct benefits.

- Rose (1992) indicates that small cities [such as Calexico], are likely to have multipliers that can range as high as 1.5—meaning that a dollar of direct impact will produce another 50 cents of economic benefits to the community as the direct benefits multiply or ripple through the city. Medium-size cities can experience multipliers of 2.0 and large cities up to 2.5.
- The IMPLAN model was applied in Arizona to show that 9,324 casino employees would generate a total of 14,784 (Multiplier = 1.6) and that the $279 million in spending would multiply to $468 million (Multiplier = 1.7)—Cornell and Taylor (2001).
- Lake and Deller (1996) provided a somewhat higher Multiplier in that 870 casino jobs were generating an additional 790 jobs (Multiplier = 1.9) and that $14 million in compensation to casino workers multiplied into another $10.13 million as a result of the ripple effect (Multiplier = 1.7). The majority of the spin-off jobs were in trade (280 jobs) and services (321 jobs), with the bulk due to employee and patron spending outside of the casino.
- Carston, Lott, McMillen, Alimov, Dawson, and Ray (2000) indicate that the Multiplier in the cities closest to Foxwoods Resort Casino is 2.1.
- Seitz and Darling report an input-output model determination of the Multiplier in Kansas of 1.3, but they further indicate that they find this to be low compared to "other calculations done by the authors."
- Don Phares (University of Missouri) in *Casino Gaming in Missouri* (2001) determined that the Multiplier for casino operations is 1.8 for both operations and construction.

Based upon all of this information, it is reasonable to assume that a 1.75 Multiplier will be experienced in Imperial County and that the county will benefit annually from casino operations to the extent of $111.5 million, as indicated in Table 5. Table 6 reflects that approximately 3,370 net new jobs will accrue to Calexico and the Imperial Valley from casino operations as follows:

- 2400 jobs (5% part-time = 2340 full-time equivalent jobs)
- 10% substitution = 234 jobs transferred from other jobs
- 300 jobs to Mexicali residents
- 120 jobs from $3.5 million casino purchases
- Multiplier = 1.75

Table 5

Direct and Indirect Wage, Non-Wage, and Patron Benefits to Imperial County from Calexico Indian Casino Operations

Direct Benefits (Table 3)	**$63.7 million**
Multiplier (1.75)	**$47.8 million**
TOTAL	**$111.5 million**

Table 6

Direct and Indirect Job Generation to Imperial County from Calexico Indian Casino Operations

Direct New Jobs (Table 4)	**1,926**
Multiplier (1.75)	**1,444**
TOTAL NEW JOBS	**3,370**

Construction Costs:

The Indian casino in Calexico is proposed to be a facility that will cost approximately $175 million to construct. It will be comprised of a 91,000 square foot casino with 130,000 square feet of food/beverage and retail components. There will be a 50,000 square foot banquet/meeting hall, a 10,000 square foot entertainment venue, and a 200 room hotel.[4]

[4] Project cost estimates are expressed in the year 2005 dollars unless otherwise noted. The capital budget represents the casino operator's best estimate of the overall project cost based on its experience in San Diego County and limited research of the Calexico construction market. Furthermore, the timing of the announced construction projects (hotels, casinos, etc.) coupled with the current demand will have a significant impact on the labor pool and other related services that could directly impact construction costs, the extent to which may not have been adequately estimated.

The casino will have 2,000 slot machines and 45 gaming tables. There will be 3 guest restaurants and one employee dining room. A swimming pool and a 3,000 guest space--400 valet space parking structure will also be developed.

Short-term jobs and benefits will flow to Calexico and Imperial County from this construction in addition to the on-going benefits of the casino's operation. In order to adequately assess such benefits to the community, labor, materials, and "soft" costs should be separately analyzed. A number of assumptions are in order:

- Soft costs such as legal and architectural will be spent other than in Imperial County for the most part. Some local planning firm may be employed to help facilitate the permit process, but these expenses are typically bigger city expenses and will be earned elsewhere.
- Soft costs such as permits, plan checks, development impact fees that often constitute 5-10 percent of new housing cost in Imperial County will be considerably less for this development in that, as a job generator, significant reductions in these charges will be offered to the developer, so that the total amount to be paid under this category and the above planning/architectural/legal category will be relatively small--$1 to $2 million possibly.
- Labor costs are generally 20-25 percent of the total cost of this kind of development.
- Materials will be secured mostly from large distributors, again likely outside of Imperial County. Plaster City to the west of El Centro will likely supply most of the dry wall but would do so for most Southern California developments no matter where located, so the specific location of this project in Imperial County provides no additional benefit to Plaster City.

All that being said, it can be expected that the major benefit to Imperial County will come from supplying the labor to construct the casino, and total labor costs should be approximately $20 million. A clue to the maximum potential retention of construction money within Imperial County is in a 2004 study performed by Charles River Associates (Oakland, California), M-Cubed (Oakland, California), and CIC Research (San Diego, California) that pertains to benefits to be retained locally in Imperial County from the fallowing/conservation Water Transfer with the San Diego County Water Authority (2004). They estimated that out of $6 million available for capital projects, only $1.1 million (18 percent) would be spent on labor and services involved in lining canals and performing other such labor intensive projects.

Construction will likely be performed by low bidder/best offer, regardless of union or non-union, which bodes better for the Imperial County labor force than were the construction to be committed to union labor; however, as the point was made above, Imperial County labor is very low skilled and the jobs that might come to local laborers will not likely be among the better paid ones. It is likely that the most that will accrue to resident labor in the region from such jobs

would be in the range of 15-25 percent at best or $3 to 5 million. This equals approximately 40-70 full-time annual jobs at $30,000 annually per full-time job equivalent, assuming 30 months for construction.[5] The 300 permanent jobs discussed above that will be filled by Mexicali residents equals one-third of the 900 jobs that are expected to go to local residents from both sides of the border. Applying the same proportion to construction jobs would result in approximately 10-20 such jobs being allocated to Mexicali residents—or $1 to 2 million, with the remaining $2 to 3 million going to Imperial County residents. Again, one-half of the payroll for Mexicali workers will be captured in the United States, indicating that up to $1 million of Mexicali construction payroll will remain for the benefit of the Calexico and Imperial county economies.

There will, therefore, be $15-17 million that will compensate those construction workers who temporarily transfer to Imperial County in order to perform this construction work. Although some of these workers may be footloose, most will have homes and families elsewhere. As such the payroll that they receive will, in part, be sent out of the county immediately. Assuming that one-third to one-half of their compensation stays in Imperial County to cover their living expenses, another $5-8 million will benefit the local economy for the two construction years for these approximately 140 full-time worker annual equivalents (based upon an average annual income of $45,000).

Construction labor multipliers are similar to the multipliers for operations in that both are from labor services. Adding $1 to 2 million of local fees and planning services to the $3 to 4 million local construction labor (including captured Mexicali payroll) and $5 to 8 million for temporarily relocated construction workers and then applying the 1.75 Multiplier utilized above, yields approximately $15-25 million one-time economic benefits and somewhat in excess of 350 annual (full-time equivalents) short-term jobs that will occur in Imperial County during the construction of the Calexico Indian casino—875 annual jobs in total for the 30 month construction period. Although substantial, these construction benefits are not nearly so impressive when compared to the on-going operations of the casino that, when the multiplier is included, are expected to provide $111.5 million annually (4.5 to 7.5 times as much as the one-time construction benefits) and 3,370 full-time equivalent permanent jobs—ten times the annual jobs generated during construction, albeit at lower pay.

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[5] It has been estimated that the casino complex will have a development period of approximately thirty (30) months once all local, state, and federal government approvals are received.

Task 5: Property Values

Much like other topics addressed in this report—crime and job creation, in particular, there are studies and papers that portray the property value impacts of casinos both positively and negatively, depending upon various conditions. However, unlike those two topics, there is not a wealth of reputable reports upon which to draw. Most studies of some substance and respected authorship conclude that casinos, in general, tend to enhance the value of nearby property, especially commercial and industrial property, and do, thereby, lead to greater property tax revenue for local governments. As with crime (Task 8), the lower income nature of Calexico and Imperial County as a whole, plus the absence of alternative development opportunities, will most likely lead to increases in property values—if not residential, then most certainly commercial and industrial.

Among the reports that highlight the positive impacts of casinos upon property values and taxes paid are:

- Fred Carston, Director of the Connecticut Center for Economic Analysis at the University of Connecticut, along with other University of Connecticut staff—William Lott, Director of Research, and Stan McMillen, Bobur Alimov, Na Li Dawson, and Tapas Ray—wrote *The Economic Impact of the Mashantucket Pequot Tribal Nation Operations in Connecticut* in 2000. They analyzed the impact of Foxwoods Casino on surrounding residential values.

  Controlling for general increases that affected all property during their 1981 to 1989 study period and comparing the increases to Hartford, which does not have a casino nearby, they found that the mean annual growth rate of housing prices near Foxwoods was 11.42 percent in contrast to Hartford's 9.03 percent (26 percent faster). From 1990 (Foxwoods opened in 1992) to 1999, nearby property increased only at 0.57 percent annually, but Hartford experienced declining values of 1.16 percent per year.

- A 1999 study by the United States Environmental Protection Agency found that Central City, Colorado had increased the value of each home by $964 within 2 miles of the casinos or a total assessed value of $1,078,000 (*Central City Case Study*).
- Deadwood, South Dakota saw housing values jump 67% (from $30,000 to $50,000) between October 1989 (the opening of 14 casinos in South Dakota) and November 1990. Prices did not continue to grow after such a substantial increase until several years later (*Rural Boomtowns: The Relationship Between Economic Development And Affordable Housing* by the Housing Assistance Council, 2000)
- Amy Lake and Steven Deller of the University of Wisconsin (*The Socioeconomic Impacts of a Native American Casino* (1996)) reported that there has been a substantial increase in property taxes between 1986 and 1994 for Casino Town, Wisconsin (the case study town was given this name by the authors to protect the privacy of the tribe and town involved) and that the "marked increase in property taxes...cannot be completely attributed to the payments made on local Tribe properties." That is to say, property tax

revenues have grown due to the development of the casino, additional development in town, and general property value increases throughout the casino region.

- John Ortiz and Sean Corcoran of California State University, Sacramento ((2004) *California's Gaming Propositions: How Has the Expansion of Gaming Affected Local Communities?*) found that counties with greater casino presence were associated with higher tax revenues, including property taxes, but more so from hotel occupancy taxes and tobacco taxes.
- Eadington (1984), Filby and Harvey (1988), Chadbourne (1997), and Oddo (1997). The benefits of legal gambling are emphasized in these reports of increased tax revenues and rising property values both on and off the reservation.

Mixed, but leaning positive, studies include:

- Andrew Buck and Simon Hakim of Temple University wrote *Does Crime Affect Property Values?* in 1994 and presented a mixed result in which in the pre-casino years property values were increasing with distance from Atlantic City possibly reflecting the lack of economic attraction to Atlantic City. The introduction of casinos, however, reversed the value-distance gradient; property values increased in the accessible localities (within 30 minutes or 30 miles) as their distance to Atlantic City diminishes.

  Real estate values in the region significantly increased in real terms in the post-casino relative to pre-casino eras. The percent increase of real estate value in accessible places is 2.4 times that of other locales. On the other hand, they contend that had development of equal magnitude other than casinos taken place in Atlantic City, accessible localities would have even greater assessed values averaging $24 million for each of twelve accessible localities and $11 million for the 52 less accessible localities in their study.

- Mark Seitz and David Darling of Kansas State University found that the growth rate of assessed valuations on both a total and per capita basis were lower than the statewide average for Jackson County and Shawnee County (the home counties for Harrah's Prairie Band Casino) during 1996 to 2001(*The Role of Harrah's Prairie Band Casino Property in the Area Economy* (2003)). Within the area's 5 counties, Jackson County ranked second, however, and Shawnee County fourth—overall in the middle and approximately 1.3 percent lower than statewide average but 0.4 percent higher than the comparable counties.

  The annual growth rate for all of these counties was 2.5 percent lower than the statewide average for commercial and industrial land, but among the 5 counties, Jackson and Shawnee had, by far, the highest growth rates—3.5 times faster than the comparable counties.

Strictly negative studies are difficult to locate with regard to property taxes but one such study is as follows:

- *Rolling the Dice: Would Casinos Harm Illinois Home Values?* is a paper written by University of Nevada, Las Vegas faculty members Terrence Clauretie, Thomas Carroll, and Nasser Daneshvary in 1998. In it, they examined Las Vegas suburb, Henderson, Nevada, and determined that after a small casino opened, the value of each home within one mile of that casino fell by 3.3 percent. If the casino were a large one, the decline was even greater—4.6 percent. Their conclusion: "...casinos are nuisances. They exert negative influences on the values of nearby residences."

A conservative estimate of increases would hold that commercial and industrial land closer to the casino, which would include Calexico and much of El Centro, will increase by a rate between 25 percent and 200 percent faster than the rest of Imperial County. Therefore, if commercial and industrial land in the county grows in value by 5 percent, such land closer to the casino can be expected to grow in value by double that amount----10 percent or possibly even more.

Residential land has a more checkered pattern in other casino communities, but, as is pointed out in the crime section, it is not expected that crime will be a major downside issue in Calexico. Therefore, it can be expected that residential property closer to the casino will also increase relative to the rest of the county by a rate up to 20 percent faster. That is, if Imperial County properties grow in value by 5 percent, the property closer to the casino will grow by an additional 1 percent due to the casino alone (6 percent growth)—other factors (e.g. proximity to Interstate 8 for commuting to San Diego) will provide further, and possibly stronger, positive or negative influences.

Tasks 6-7: Sales Revenue Owing to Mexican Residents and Border Crossings

Mexicali residents number approximately 850,000 and earn a mean family income of approximately $7,600 per year (Division of Economic and Social Studies of Banamex and *Tendencias de Consumo y Gasto de los Mexicalence*. Compendio de Estadística, Economía, Mexicali. (CEESEM) 2003). Workers are primarily employed in the service sector (38 percent), followed by manufacturing (27 percent) and retail (16 percent), with approximately 8 percent of legally identified workforce of Mexicali working in the United States regularly--growing to 10 percent in busy agricultural months (Economic Census--2001).

With respect to the border commercial activity between Mexicali and Calexico, it is estimated that businesses and residents of Mexicali spend approximately 70 million dollars monthly in the Imperial Valley (San Diego Dialogue, 1996)--by Mexicali residents for consumer goods and by Mexicali businesses for materials, supplies, services, and resale goods.

Mexicali has, therefore, a clearly defined strong interdependency with businesses in Calexico and El Centro. This has facilitated a relatively high quality of life for Mexicali residents who have easy access to goods and services of high quality and better prices in the United States. The recent establishment of large commercial chains in Mexicali has somewhat modified the consumption patterns of Mexicali residents, registering reductions in border crossings from 2000-2002, but increasing again in 2003 and remaining stable in 2004 (U.S. Customs). On the other hand, despite these fluctuations, the actual sales dollars from Mexican border crossings has continued to grow, demonstrating annual increases of 11 percent, 3 percent, 13 percent, 9 percent, and 8 percent from 2000 through 2004 (California State Board of Equalization).

According to the above referenced study by CEESEM (2003), 74 percent of Mexicali households depend, at least to some extent upon a family member who has a border passport—54 percent indicated that products were purchased for them by that family member in the United States and 38 percent indicated that they cross the border at least once per week for such purchases. These shoppers generally spend between 20 and 100 dollars per trip, totaling approximately 250 million dollars per year—or 30 percent of the total business and consumer spending from Mexicali in the Imperial Valley. That is to say, 21 percent of individual Mexicali family income is spent by Mexican consumers in the United States. Table 7 depicts the distribution of this spending, with

78 percent of cross-border shoppers purchasing clothing, 72 percent footwear, 65 percent chicken, 64 percent electronics, and 62 percent gasoline.

Table 7
Percentage of Mexicali Cross Border Shoppers That Purchases Various Consumer Goods

Consumer Good	Percentage Purchase
Clothing	78
Footwear	72
Chicken	65
Electronics	64
Gasoline	62
Sausage	61
Chips	61
Auto Parts	54
Bacon	45
Perfume	43
Tires	42
Bread	41
Turkey	40
Bath Soap	38
Detergent	38
Paper Products	37
Pet Food	37

Among higher income Mexicali residents (those earning more than two times the average family income) 97 percent shop at Costco in El Centro in contrast to 67 percent at the Mexicali Costco. Similarly, among those earning at least 50 percent above the average income, 90 percent shop at the Calexico Wal-Mart and 60 percent at the El Centro Wal-Mart versus 67 percent at Mexicali's Wal-Mart.

Table 8 presents a summation of the total impact of this cross border commerce in terms of 12,187 jobs that are not generated in Mexicali because the spending occurs in the United States. The table was compiled from Universidad Autónoma de Baja California (UABC) 2005 estimates, supported by data from the Matriz de Insumo-Producto -- Consumption-Production index.

Table 8
Principal Mexicali Employment Sectors Impacted by Cross Border Commerce

Sector	Jobs Lost
Retail	9,784
Professional Services	910
Financial Services	605
Communications	351
Transportation	90
Public Utilities	88
Other Goods and Services	80
Real Estate	79
Restaurants/Hotels	63
Entertainment	59
Plastics	42
Electronics	36
Total	12,187

Professor Francisco Sosa of UABC-Center for Rural Studies, who contributed significantly to this section by gathering and summarizing data from Mexicali, has used the historical trends of border crossings, the current buses that transport Mexicali residents to the Paradise Casino at Yuma, and Golden Acorn and Viejas in San Diego County to estimate that an additional 700-1000 daily customers of the new Calexico casino will come from Mexicali. In view of the number of crossings currently being approximately 56,700 per day, this increase of 1 to 2 percent is considered to be inconsequential with regard to economic impact upon Calexico in that these crossings may be combined with other shopping-related trips and that the ancillary expenditures associated with these trips will not reflect the full distribution of the consumption and jobs presented in Table 7 and Table 8. Further, the Multiplier already accounts for much of the additional economic activity that is to be derived. To factor in these border crossers as a separate category without adjusting the Multiplier would equate to double counting the benefits. Similarly, the impact of 300 new employees from Mexicali is already accounted for in the Multiplier calculation presented in Tasks 1-4. As such, it is concluded that border crossings associated with the casino will not provide significant impact to Calexico and Imperial County beyond those already factored into the employment benefits previously discussed.

Task 8: Crime Rate

Gambling is often perceived as being associated with crime. This perceived association is an easy one to understand. Many types of gambling have been and still are illegal. When gambling laws were first relaxed in parts of the United States, organized crime stepped in to own and operate many of the first casinos.

Gambling is feared to increase problem and pathological gambling, thereby encouraging illegal acts by those impacted in order to finance their problem, by making the supply of the addictive product more readily available. Casinos are thought to increase the ease of identifying criminal opportunities in that more vulnerable visitors and seniors are attracted to casinos and considerable amount of cash is carried into and out of them.

Gambling is also thought to attract less desirable forms of economic development—pawnshops and escort services, in particular. Further, gambling, with its high demand for unskilled labor, is often accused of attracting an employee base that is more prone to crime.

These fears do have a certain theoretical logic that causes residents to frequently oppose the introduction of gambling into their communities; however, this theoretical logic fails to emerge as proven in the vast majority of studies that have been undertaken.

This section will explore three components of the issue of crime and gambling:

- Whether a significant relationship exists between organized crime and gambling—especially Indian gaming;
- The extent to which problem and pathological gambling is a real threat from introducing increased opportunities to gamble, and;
- Whether casinos increase street crime in their regions.

Organized Crime:

The vast majority of studies performed by universities and governments indicate that there has been no significant presence of organized crime in the gambling industry since the 1970s when regulatory authorities took a stronger role in licensing and supervising the industry.

William R. Eadington, Director of the Institute for the Study of Gambling and Commercial Gaming at the University of Nevada, Reno, wrote in *The Spread of Casinos and Their Role in*

Tourism Development (1998) that "The issue of organized crime and systematic corruption with respect to casinos has steadily diminished over the past three decades. With few exceptions, modern permitted casino gambling in most countries has significantly limited any role of organized crime."

Roger Dunston in a 1997 report for the California Research Bureau of the California State Library entitled *Gambling in California*, also says that "there is no evidence that organized crime has significantly infiltrated Indian gaming operations....The Los Angeles Times ran a lengthy article on Mafia attempts to take over an Indian gaming operation in California. The attempts were ultimately unsuccessful."

According to the State of Hawaii Department of Business, Economic Development, and Tourism in *The Economic Impacts of Shipboard Gaming and Pari-Mutuel Horse Racing in Hawaii* (1997): "The image of organized crime as part of the gambling activity has diminished over time as most gaming companies, from suppliers to the gaming services, have become public and reputably traded on the stock exchange."

The *Statement of Bruce Ohr*, Chief, Organized Crime and Racketeering Section, Criminal Division, U.S. Department of Justice (July 25, 2001) to the U.S. Senate Committee on Indian Affairs indicates: "The Department has found no evidence of a systematic infiltration of Indian gaming by elements of organized crime."

Adam Rose of Pennsylvania State University in a 1998 study for the National Gambling Impact Study Commission, *The Regional Economic Impacts of Casino Gambling*, stated "Concerns about the role of organized crime in casino gambling have dwindled given the greatly heightened involvement of large corporations..."

Donald Barlett and James Steele, in Time Magazine (December 16, 2002—*Wheel of Misfortune*), are two critics who hold out that organized crime may well be involved. They contend that "More than 90 percent of the contracts between tribes and outside gaming management companies operate with no oversight....The tribes' secrecy about financial affairs—and the complicity of government oversight agencies—has guaranteed that abuses in Indian country...go undetected, unreported, and unprosecuted."

There are many other sources; however, with few and relatively minor exceptions, the organized crime fear is effectively moot.

Problem and Pathological Gambling:

The association between problem and pathological gambling, although less unanimous than the organized crime issue, also tends to render the fears of increased problems due to casinos to be substantially unfounded.

Problem and pathological gambling parallel alcoholism in its nature as an addiction. For both addictions:

- A high proportion of the population participates as consumers at some time or another;
- A subgroup of all consumers are heavy consumers of the commodity;
- Within that subgroup there is some proportion of the total that consumes to excess;
- When they consume to excess, their consumption patterns become a significant negative influence on their lives and the lives of those to whom they are responsible;
- Ultimately, rampant overconsumption generates costs to the society at large in the forms of reduced productivity, absenteeism, job loss, unpaid debts, bankruptcy, criminal justice costs (as they commit crimes to finance their addiction), and social welfare costs of health care and family dependency.

Blaszczynski and Silove (1996) noted that criminal behavior among adolescent gamblers may be more prevalent than among adults because of their limited means of raising funds. In the United Kingdom, Fisher (1991) reported that 46 percent of adolescents surveyed stole money from their family, 12 percent stole from others, 31 percent sold possessions, and 39 percent gambled with school lunch or travel money.

In an Australian study, Blaszcynski and McConahy (1994) reported that most adult problem gamblers use their wages to finance gambling, supplemented by credit cards (39 percent), borrowing from friends and relatives (33 percent), and loans from banks and other financial institutions (30 percent). In Canada, Ladouceur (1994) found that the pathological gambler spends between $1000 and $5000 per month on gambling and uses both family savings (90 percent) and borrowed money (83 percent).

Earl Grinols (University of Illinois) and David Mustard (University of Georgia) in *Measuring Industry Externalities: The Curious Case of Casinos and Crime* (2004) reported that a Maryland study found that 62 percent of a Gamblers Anonymous group committed illegal acts as a result of their gambling, 80 percent of whom committed civil offenses and 23 percent criminal offenses.

Another survey of 400 Gamblers Anonymous members showed that 57 percent admitted stealing to finance their gambling.

These percentages are substantial, especially among adolescents and Gamblers Anonymous members, who are not necessarily representative of all problem gamblers. However, just how big is this population? A 57 percent crime rate, as cited by Grinols and Mustard, may or may not be noteworthy, depending upon the magnitude of the population of problem gamblers and depending upon the causal relationship, if any, with casinos.

Grinols and Mustard state that pathological gamblers are 1 to 2 percent of the population and problem gamblers another 2 to 3 percent. Robert Goodman (*Legalized Gambling as a Strategy for Economic Development* (1994)) estimated that 9.3 million adults and 1.3 million teenagers had gambling problems (2 to 3 percent of total U.S. population). The State of Hawaii study identified that various studies estimated pathological gambling to be approximately 1 to 6 percent of the adult population in the United States. The magnitude of the number of problem gamblers, therefore, can range between 3 million and 11 million adults and adolescents. On the low end of this range, the problem is relatively minor; on the upper end, it is potentially substantial.

Casino gambling, however, does not seem to be a major contributor to this number. There is some conflicting evidence, but the more prominent studies and researchers point to findings that are characterized by those below.

- Jonathan Taylor, Research Fellow at the Harvard Project on American Indian Development and Senior Policy Scholar at the Udall Center at the University of Arizona, testified before the Rhode Island Special House Commission to Study Gaming (August, 2002) that "Studies indicate that pathological gaming has remained steady at about 1 percent over nearly a quarter century despite a 1600 percent increase in the availability of gaming."
- William Eadington of the University of Nevada, Reno stated to the same legislative body, when asked if casino expansion in the state would foster more problem gambling: "My suspicion is probably not. Not from the empirical studies I've seen in other jurisdictions. Not from my experience that has occurred in other jurisdictions that have indeed added to their gaming offerings, casino style gaming offerings."
- Jonathan Taylor, with Matthew Kreps, and Patrick Wang of Harvard University report in *The National Evidence on the Socioeconomic Impacts of American Indian Gaming on Non-Indian Communities* (2000) that there is "no evidence of harmful economic or social impacts due to Indian casino introduction is discernible in our 30 indicators of economic and social health."
- Jonathan Taylor, along with Joseph Kalt and Kenneth Grant of Harvard University in 2002 (*Public Policy Analysis of Indian Gaming in Massachusetts*) once again concluded

that "A further examination of these 100 non-Indian communities determined that those proximate to Indian casinos...witnessed...no increases in social ills."

- Jan Jones, former mayor of Las Vegas and current consultant to Harrah's in testimony to the Rhode Island Special House Commission to Study Gaming, said "A 1997 study for the state of Connecticut concluded that probable pathological gambling rates might have actually fallen in the state during the period in which Foxwoods has operated. Many other states show the same non-effect."
- Amy Lake and Steven Deller of the University of Wisconsin (*The Socioeconomic Impacts of a Native American Casino* (1996)) indicate that "compulsive gambling, though a serious social issue and difficult one to research accurately, has not been shown to worsen due to legalized gambling."

To the contrary are some specific studies and anecdotes from Connecticut, South Dakota, Iowa, Wisconsin, Washington State, Mississippi, and South Carolina that show the following:

- According to John W. Kindt (University of Illinois) in *Business-Economic Impacts of Licensed Casino Gambling in West Virginia* (1998), "... field research strongly suggests that the introduction of widespread legalized gambling in South Dakota...over a two year time span, caused a one percent increase in the number of problem and probable pathological gamblers."
- Kindt also reports about a 1995 Iowa study: "...the lifetime probable pathological and problem gamblers in Iowa increased from 1.7 percent of the public in 1989 to 5.4 percent in 1995."
- At the Rhode Island hearing discussed above, Chris Armentano, Director of Problem Gambling Services for the Connecticut Department of Mental Health and Addiction Services, reported that in 1993, the year after Foxwoods Resort Casino opened, and contrary to Jan Jones testimony, his program saw about 50 clients. By fiscal '02 they had about 560 clients.
- Grinols and Mustard (2004) discuss that the number of communities in Wisconsin holding Gamblers Anonymous meetings grew from 6 to 29 between 1992 (when Indian tribes began to open casinos) and 1999. They refer to the National Gambling Impact Study Commission's noting that Gamblers Anonymous increased from 650 chapters in 1990 to 1328 in 1998 nationwide. They also talk about South Carolina, where in the year 2000, slot machines were banned and the number of Gamblers Anonymous groups fell from 32 to 11.
- In Mississippi, where 30 riverboat and Indian casinos are in operation, 4.9 percent of the state's population is "addicted" to casino gambling in contrast to the national average of 1.14 percent of adults (Rachael A. Volberg, *Gambling and Problem Gambling in Mississippi*, Report to the Mississippi Council on Compulsive Gambling, January, 1997).
- In Washington State, another state with tribal casinos, a report commissioned by the state's Council on Problem Gambling found that between 3 and 5 percent of the state's residents have had "severe" gambling problems during their lives (Rachael A. Volberg, *Gambling and Problem Gambling in Washington State: A Replication Study, 1992 to 1998*, Report to Washington State Lottery, May, 1999).

These conflicting data reflect the paucity of definitive studies. The positive positions are typically larger scale studies performed or endorsed by nationally prominent gambling experts and scholars. The more negative studies are very small and somewhat selective in that they beg the question: "What happened in other states with legalized gambling?" What joins these two

positions together, however, is that the population of problem gamblers is a relatively small subset of the total population and that there is only a relatively small amount of anecdotal evidence that their problems lead to increased crime. Further, with this potential problem being so small, there are sufficient economic benefits to be obtained from casinos in many of these communities and in Calexico, in particular, that it can be expected that there will be additional funds available to help. This availability of additional funds from the economic benefits of the casino most probably explains much of the expansion of the mental health program in Connecticut rather than an unlikely tenfold increase in problem gamblers.

Street Crime:

Two of the more recent and sophisticated analyses of the street crime impact of casinos, and, in particular, Indian casinos, that suggest that casinos increase crime are the above mentioned Grinols and Mustard study of 2004 and *Social and Economic Impacts of Native American Casino*s by William Evans and Julie Topoleski (University of Maryland (2002)).

- Grinols and Mustard (2004) looked at 3,165 counties across the United States (except Alaska) from 1977 to 1996 and used the 7 FBI Index crimes (aggravated assault, rape, robbery, murder, larceny, burglary, auto theft) and regression analysis to assess the impact upon crime by all forms of casinos. They found that counties with casinos demonstrated increases in the following crime rates per 100,000 population in the year of the casinos' openings:
    - Aggravated assault: 157 more per year than non-casino counties
    - Rape: 12 more than non-casino counties
    - Robbery: 86 more
    - Murder: 2 more
    - Larceny: 1129 more
    - Burglary: 144 more
    - Auto theft: 267 more

  The casinos themselves, however, are not the full cause of these numbers. In many cases, the casinos themselves are a relatively small part of this total increase, as follows:

    - Aggravated assault: 18 more cases of the 157 (11 percent) due to casino operations
    - Rape: 1 out of 12 (8 percent)
    - Robbery: 34 out of 86 (40 percent)
    - Murder: 0 out of 2 (0 percent)
    - Larceny: 219 out of 1129 (19 percent)
    - Burglary: 24 fewer cases due to the casino
    - Auto theft: 217 out of 267 (81 percent)

It can be seen that Indian casinos most impact crime in the categories of auto theft, robbery, and larceny, with no effect upon murder rates, and actually show a decrease in burglaries. Hypothesizing that the effect upon crime may not be immediately noticeable, Grinols and Mustard looked at periods from 2 years before casinos opened to 5 years after and found that:

- Aggravated assault increases significantly in the third year after opening and continues to increase in the fourth and fifth year
- Rape follows the same pattern—increasing in year three and thereafter
- Robbery increases begin immediately upon opening and continue to grow
- Murder: no significant difference
- Larceny increases begin immediately but then trail off into no significance until year five, where they resurface
- Burglary finally shows a statistical increase in year five
- Auto theft increases significantly starting two years before opening and then the increases level off at opening and thereafter.

Grinols and Mustard concluded that the "crime mitigating influences of wages and employment occur before and shortly after opening. In contrast crime-increasing factors are long term." Casino induced changes in the behavior of the population are long-term, they contend, especially as they impact aggravated assault and rape, with auto theft and robbery being problems from the start.

- Evans and Topoleski (2002) studied property crimes and arrived at much the same conclusion as Grinols and Mustard—that the "results show little consistent change in property crimes per 100,000 until the fourth year after a casino opens." They find that all of the impact is due to larceny and auto theft alone and occurs within the casino county, finding "no statistically significant impact of casinos on property crimes in counties within 50 miles of a casino."

  With regard to violent crimes, Evans and Topoleski also find that there is a significant increase four years after opening but it is small in magnitude relative to the impact on property crimes, which is 174 crimes per 100,000 in year four—substantially fewer crimes due to the casino than identified by Grinols and Mustard. They say that this lag in the impact of the casino upon crime, especially auto theft and larceny, is explained by the "hypothesis that casinos encourage pathological gambling and these people eventually turn to crime to feed a habit"—a hypothesis that is seriously called into question above.

Additional findings of increased crime are as follows:

- Dennis McGrath and Chris Ison, staff writers for the Minneapolis-St. Paul Star Tribune (1996) wrote a lengthy article entitled *Gambling Spawns a New Breed of Criminal.* In it they state that "Between 1988—when the first of the state's 17 casinos began operating—and 1994, counties with casinos saw crime rate rise twice as fast as those without casinos...The analysis shows that differences are greatest for economic and property crimes such as fraud, theft, and forgery/counterfeiting." They offer:
  - The median change in the forgery/counterfeiting rate in counties with casinos is more than double the increase in counties without—55 percent versus 25 percent.

- For fraud, the median change in non-casino counties is 16 percent. For casino counties, it is 40 percent.
- For larceny, counties without casinos increased by 2 percent and counties with casinos by 34 percent.

McGrath and Ison did not control for other factors, and Red Wing, Minnesota police chief Ed Krause and other police officials contacted by the writers added that they would expect to see such an increase in crime connected to any development that attracts thousands of visitors per day.

- Law enforcement personnel rose by 77 percent in Atlantic City from 1978 to 1989 (Caron and Scarpetti-1991), and Strokowski (1996) found that police officers in Central City, Colorado increased from 2 _ officers to 19 after gaming was introduced.
- *Casinos, Crime, and Real Estate Values: Do They Relate?* was written in 1989 by Andrew J. Buck and Simon Hakim of Temple University and Uriel Spiegel of the University of Pennsylvania. They showed that casinos increased the level of crime significantly in Atlantic City. The aggregate level of all street crimes increased by 107 percent in accessible (within 30 miles or 30 minutes of Atlantic City) and 39 percent in the less accessible places between the pre- and post- casino eras. According to their study, sources of casino-related crime include the temporary visitors, criminals who realize the new crime opportunities offered by the casinos, and the employees of the casinos.
- John Ortiz and Sean Corcoran of California State University, Sacramento ((2004) *California's Gaming Propositions: How Has the Expansion of Gaming Affected Local Communities?*) found that counties with greater casino presence were associated with somewhat higher crime rates. In contrast to all other studies cited, they found these higher rates to be present in aggravated assaults and violent crime.
- More locally, the Valley Center Sheriff's substation in northern San Diego County has experienced an increase in the crime rate of 117 percent since 1999 (North County Times, May 10, 2004)—24 percent in 2003 over 2002 (several large casinos have been built and opened within these years—Pala 2003, San Pasqual and Rincon 2002, Pauma 2001), but violent crimes declined by 14 percent. While these percentages are large, the numbers are small. Property crimes went up 34 percent in 2003 from 406 to 544, including 116 stolen vehicles.

Total calls for service increased from 5,589 in 1999 to 8,862 in 2003. Starting in 2003, deputies began to maintain a separate record of response to calls on reservation land, and during that year there were:

- 123 calls for service at the Pauma reservation—81 at the casino (66 percent of reservation calls and 2 percent of the increase in calls for service since 1999)
- 700 calls at the Rincon Indian Reservation—195 at the casino (28 percent of reservation calls and 6 percent of the total increase)
- 542 calls at the Pala Indian Reservation—181 at the casino (33 percent and 6 percent)
- 361 at the San Pasqual Indian Reservation—140 at the casino (39 percent and 4 percent)
- 109 at the La Jolla Indian Reservation—9 at the gambling arcade (8 percent and 0 percent)

- In total, the casinos themselves account for 19 percent of the increase in calls.

Among those researchers who find that crime is not a significant downside of casinos and might, under certain circumstances, actually decrease crime rates:

- B. Grant Stitt (University of Nevada, Reno), Mark Nichols (University of Nevada, Reno), and David Giacopassi (University of Memphis) in *Does the Presence of Casinos Increase Crime?* (2003) examined 6 gambling communities—Biloxi, Mississippi; Alton, Illinois; Sioux City, Iowa; St. Joseph, Missouri; St. Louis, Missouri; and Peoria, Illinois—and matched them individually against 5 comparable non-casino communities—Pensicola, Florida (matched against Biloxi); Rockford, Illinois (Alton and Peoria); Waterloo, Iowa (Sioux City); Fort Smith, Arkansas (St. Joseph); Richmond, Virginia (St. Louis). Nineteen comparisons of various crimes (from murder to driving under the influence) were made between each matched pair, for a total of 114 comparisons.

  When population was the standardizing factor, 52 of the 114 comparisons were statistically significant in their crime rate differences. Among these differences, 54 percent (28) were positive (indicating more crime) and 46 percent were negative (indicating less crime). When population at risk is the standard, which includes not only residents but tourists and daytime working population, there were 41 differences, of which 49 percent (20) were negative and 51 percent (21) were positive.

  Examining only index crimes (murder, sexual assault, aggravated assault, burglary, larceny, motor vehicle theft, and robbery), only 23 comparisons are significant based on resident population, 52 percent (12) showed decreases and 48 percent (11) showed increases. For population at risk, there were 19 significant differences, 58 percent (11) showed increases and 42 percent (8) showed decreases. The introduction of time lags did not change the findings.

  Increases were exhibited most frequently in Biloxi and Peoria while Alton and Sioux City showed decreases. The authors concluded that "the general lack of increased crime in new casino jurisdictions tends to undermine the view of casinos as hot spots and weakens the linkage between ...casinos and crime."

- Fred Carston, Director of the Connecticut Center for Economic Analysis at the University of Connecticut, along with other University of Connecticut staff—William Lott, Director of Research, and Stan McMillen, Bobur Alimov, Na Li Dawson, and Tapas Ray, wrote *The Economic Impact of the Mashantucket Pequot Tribal Nation Operations in Connecticut* in 2000. This study found that in three communities near the Foxwoods Resort Casino, crime increased from 1990 to 1998 by 70 percent, and 14 percent in two of them, but decreased by 31 percent in the other. Most of the increases were due to crimes at the casino, handled by tribal security. For the communities themselves, "the effect was minimal. Non-casino crime is essentially unchanged since the introduction of Foxwoods."
- The state of Hawaii study (1997) concludes that "there is a tendency for the crime rate to increase if the crime rate before gaming was introduced was low....The crime rate may increase in small communities which play host to a casino because of the influx of more people visiting the area. But, if introduced to a high crime, high unemployment, and

depressed community, introduction of gambling may possibly be associated with a decrease in the crime rate by as much as 2.5 to 50.0 percent."

- Lake and Deller (1996) reported that there has been a substantial increase in the number of police response to calls in Casino Town...From 1991 to 1995, the number of municipal police responses increased by 104 percent. When the population-at-risk is considered..., it is evident that the risk of victimization has decreased in Casino Town." They based their finding upon the fact that, while crime increased 104 percent, the population increased from 800 to 3,700 (387 percent), and that "neither residents nor law enforcement officials attribute the crime directly to the casino, but rather to the increased population."
- Eadington (1998): "Though one might expect that there should be an increase in crime in areas that introduce casinos, the evidence to support such a hypothesis is neither very strong nor conclusive in its directions (Margolis (1997) *Casinos and Crime: An Analysis of the Evidence*). Though, *ceteris paribus* [all other things being equal], one might expect crime rates to increase as a result of problem gambling, this might be offset by improved job opportunities for previously unemployed workers."
- Douglas Clement, writing for the Federal Reserve Bank of Minneapolis in 2003 (*Milking the New Buffalo*) indicates that in Hinckley, Minnesota, near the Grand Casino Hinckley, property and violent crimes have remained stable for the past decade, but there have been increases in driving under the influence and vandalism.
- Maria Napoli (Arizona State University) in *Native Wellness for the New Millenium: The Impact of Gambling* (2002) acknowledges that crime continues to be a problem where money is plentiful, yet some tribes have reduced crime. For example, since the first full year of casino operation, the Ho-Chunk tribe of Wisconsin has had an increase in crime in all three of their casinos while the Mashantucket and Pequot tribes in Connecticut, the Oneida tribe in Wisconsin, the Sault Ste. Marie and Chippewa tribes in Minnesota have found a decrease in crime. Prior to the opening of their casino, crime on the Winnebago reservation had reached almost epidemic proportions. With a population of 1,200 people there were 1,476 arrests prior to the casino opening in 1991 but only 492 arrests in 1992 the year the casino opened.
- Taylor, Kreps, and Wang (2000) drew a distinction between all casinos and Indian casinos. They studied communities near the Mashantucket Pequot and Mohegan casinos in eastern Connecticut, and the Shakopee Mdewkanton Sioux and St. Criox Chippewa casinos outside of Minneapolis-St. Paul, Minnesota and found discernible reductions in crime in the categories of motor vehicle theft (28 percent decline) and robbery (12 percent decline). They found no statistically significant effects for larceny, burglary, assaults, and the overall crime indexes. They concluded that the "data on auto theft and robberies are consistent with the hypothesis that casino introductions in depressed regions would reduce the existing propensity to commit crime."

These studies offer conflicting information and conclusions in some cases but also certain consistencies that allow some degree of summary analysis. Crime increases due to casinos are not at all certain. They may occur in some areas but will not in others. Crime rate increases are least likely to occur in lower income, populated areas, such as Calexico and are, in fact, likely to decline because of the increased economic benefits that will accrue to the area. To the extent that crimes do increase, the increase will not be large and it will be entirely in non-violent crimes such as auto theft, larceny, and robbery. Indian casinos do not increase crimes as much as non-Indian

casinos, and whatever the increase that might occur, would occur in any event for any development that attracts substantial economic activity.

In order to test this conclusion, crime index data has been obtained for comparative purposes from several local jurisdictions. First, the data from the San Diego County Sheriffs Valley Center substation were examined by Rea & Parker Research to verify the report in the North County Times and to explore other potential findings. The Valley Center crime index increased 25 percent between 2002 and 2003 but declined by 8 percent in 2004, according to the Automated Regional Justice Information System (ARJIS). With Rincon and San Pasqual opening in 2002, the increase in 2003 might indicate some agreement with the report in the North County Times, but the 8 percent decline in 2004 despite the opening of Pala does not reconcile with that article's thesis. Examining two adjacent Sheriff's substations—Fallbrook and Ramona—that do not have casinos within their territories, Ramona's crime index increased 43 percent in 2003 and decreased 27 percent in 2004; Fallbrook increased 21 percent in 2003 and another 11 percent in 2004. These patterns parallel Valley Center. There is, therefore, nothing in the Valley Center data that would indicate poorer crime conditions there than elsewhere in this part of northern San Diego County.

There is a possibility that Ramona and Fallbrook are also impacted by the casinos in northern San Diego County and southern Riverside County (most notably, Pechanga); therefore, two other parts of San Diego County were also examined—the East Village area of downtown San Diego, where the new ballpark for the San Diego Padres was being built for its 2004 opening and where considerable economic development and construction has been taking place in addition to the ballpark, and Imperial Beach, an area within the county at the international border with Mexico and as far removed from the new North County casinos as possible.

The East Village area of downtown demonstrated a 36 percent increase in the crime index in 2003 and a breakeven 0 percent in 2004. Imperial Beach showed a 21 percent increase in 2003 and a 2 percent decline in 2004. That is to say, the Valley Center area has not been affected by the new casinos any differently than other parts of San Diego have been affected by all other factors. The casinos have demonstrated effectively no impact.

Another comparison is possible. El Centro, California is the main city in Imperial County with a population of 39,225 and not a casino city—the closest casino being 50 miles away at the California-Arizona border. Yuma, Arizona is the main city in Yuma County with a population of

82,437 and home to the casino (Paradise opened in 1996) that is 50 miles from El Centro and another casino in the suburb of Somerton (Cocopah originally opened in 1992 but expanded, refurbished and reopened in 2003). Examining data from 1994, El Centro and Yuma crime indexes changed as follows:

El Centro Crime Index Changes

1995	9 percent decline from 1994
1996	19 percent decline from 1995
1997	13 percent increase from 1996
1998	12 percent decline from 1997
1999	7 percent increase from 1998
2000	12 percent decline from 1999
2001	1 percent decline from 2000
2002	26 percent decline from 2001
2003	26 percent increase from 2003
Overall 1994-2003	38 percent decline in crime index

Yuma Crime Index Changes (no data available between 1992 and 1995)

1997	1 percent increase from 1996
1998	missing
1999	8 percent decline from 1997
2000	17 percent decline from 1999
2001	12 percent decline from 2000
2002	6 percent increase from 2001
2003	1 percent decline from 2002
Overall 1996-2003	28 percent decline in crime index

Imperial County Crime Index Changes

1995	0 percent change from 1994
1996	30 percent decline from 1995
1997	30 percent increase from 1996
1998	11 percent decline from 1997
1999	9 percent decline from 1998
2000	0 percent change from 1999
2001	6 percent decline from 2000
2002	11 percent decline from 2001
2003	12 percent increase from 2002
Overall 1994-2003	31 percent decline in crime index

Yuma County Crime Index Changes

1995	7 percent decline from 1994
1996	18 percent decline from 1995
1997	9 percent increase from 1996
1998	4 percent increase from 1997
1999	12 percent decline from 1998
2000	1 percent increase from 1999
2001	11 percent decline from 2000
2002	18 percent increase from 2001
2003	33 percent decline from 2002
Overall 1994-2003	47 percent decline in crime index

Although there is some inconsistency from year to year, Yuma and El Centro and the counties in which they are located have been experiencing significant declines in their crime rates of between 3.5 and 4.7 percent annually, unaffected by the proximity of casinos. This confirms the San Diego County findings and the general conclusion that the alleged relationship between casinos, especially Indian casinos, and street crime, along with problem gambling, and organized crime are fears that are not supported by facts. Crime is not an issue that should cause any significant rethinking of public policy as it applies to the development of an Indian casino in Calexico.

Task 9: City Infrastructure

The Calexico city manager, redevelopment director, director of public works, and fire chief were all interviewed regarding their perceptions of the current infrastructure in the city to facilitate the project. Questions specifically inquired about the current infrastructure of water, sewer, public safety (fire and police), traffic patterns, and the current general plan for Calexico. The results from these discussions include:

- Water – the potable water plant is running at 45 percent capacity. A basin on the northeast section of town is planned along with additional pumping capacity.
- Wastewater treatment – the current sewer plant is running at 60 to 65 percent capacity. At this time, it is planned to double this capacity within the next five years.
- Public safety – the fire and emergency response is presently at or over capacity. Currently, there is the main fire station and one substation on the west side of town. In order to provide additional services, there need to be a fire substations at the northeast side of town, in the northern end, and also for the northwest. The general rule is to have 1.5 fire personnel for every 1,000 residents. Currently, the fire department has 27 full time employees with seven on duty at any given time. Two fire fighters are to remain at the station at any given time. This situation is complicated further because there is not a hospital within the city limits and, therefore, all emergencies are either treated by the paramedics or transferred to El Centro Regional Medical Center by the paramedics.
- Traffic– at present the majority of the roads in Calexico are at capacity or close to capacity according to traffic ratings from the California Department of Transportation. The City presently has two signal lights planned to correct potentially dangerous intersections. The intersection of Cole Road and Highway 98 is difficult to cross for traffic coming and going from the north end shopping district in Calexico to the East Port of Entry. A signal light is set for this intersection. A second signal light will be placed at the intersection of Highway 111 and Jasper Road---just north of the city. This intersection has been closed since late 2003 after a spate of accidents at this intersection, and the death of Calexico's historian and former fire chief Pete Pedroza.
- General Plan -- the city's general plan is being updated presently. Most of these infrastructural improvements have already been adopted by the plan with special consideration for additional residential housing units and including the mechanisms for financing them.

Overall, the casino is seen as a positive economic development project for Calexico by city staff. Economic development has been based primarily on the development of residential housing units in the community. Residential development, though it brings initial funding into the city, makes it difficult to sustain growth and provide quality services to the residents. Therefore, those interviewed felt that the casino would benefit the local residents by providing entertainment facilities, employment, and needed tax dollars to the community.

Task 10: Labor Pool Sources/ Task 12: Public Assistance Programs

Welfare and other income transfer payments are, of course, directly related to employment. Therefore, the debate about casinos' impact upon public assistance programs depends upon the view that the researcher holds about the economic development potential of gaming. Inasmuch as this report has strongly adopted a stance that there is to be substantial economic development created by a casino in Calexico, it follows that among the benefits will be jobs that will remove individuals from many social service rolls.

Another potential countervailing influence upon public assistance is pathological gambling that can result in unemployment, bankruptcy, and other ills that can cause an increase in public assistance costs. This report has taken the position that problem gambling is not likely to be a major consequence of the casino. Therefore, once again, it is likely that public assistance costs in the Imperial Valley will be reduced by this casino development.

Nonetheless, it is of value and consistent with the balance of this analysis, that findings about public assistance in other communities be explored to verify these conclusions and utilized in the determination of the casino's potential impact in this regard upon the Imperial Valley.

Casinos reduce public assistance costs:

- Jonathan Taylor, with Matthew Kreps, and Patrick Wang of Harvard University report in *The National Evidence on the Socioeconomic Impacts of American Indian Gaming on Non-Indian Communities* (2000) that Indian casinos reduce welfare and income support programs substantially--unemployment insurance payments are reduced by 32 percent after the opening of an Indian casino, transfer payments are reduced by 8 percent, and income maintenance program payments are decreased by 38 percent. "Not only do Indian casinos help the poorer of the tribes move ahead vis-à-vis their counterparts with respect to employment, but also ...Indian casinos have accomplished the same for proximate non-Indian communities with respect to income maintenance programs."
- Adam Rose of Pennsylvania State University in a 1998 study for the National Gambling Impact Study Commission, *The Regional Economic Impacts of Casino Gambling*, stated about casinos: "...they do yield many economic benefits, including helping people get off welfare rolls, improving their access to health benefits, establishing a good employment record, and accumulating savings to purchase a home and to educate their children....Also, the situation is much more positive in the case of Native American casinos, where in many instances all the members of the tribe are part of ownership."
- Cheryl King and Casey Kanzler of Evergreen State College in Washington State have reported that there was a 15 percent reduction in the number of families in poverty on Indian reservations with casinos from 1990 to 2000 (*Background to a Dream*, 2002), with some reservations achieving as much as 81-100 percent reductions. In 1997, tribes employed 14,000 Washington residents—both tribal and non-tribal, so some of these

benefits also accrued to non-tribal members. Furthermore, casino tribes spend 30-35 percent of gaming revenues investing in social services such as medical care, education, childcare, and addiction/dependency programs (30-40 percent in Oregon according to testimony of Joseph Kalt (Harvard University) before National Gambling Impact Study Commission --1998).

- Stephen Cornell and Jonathan Taylor of the Udall Center for Studies in Public Policy, University of Arizona in *An Analysis of the Economic Impacts of Indian Gaming in the State of Arizona* (2001) wrote that "...we know that many Indian gaming operations...employ significant numbers of former welfare recipients. In particular, some tribal gaming operations are closely associated with reductions in the number of persons on welfare rolls in counties where those operations are located."

  In its analysis of 100 gambling and non-gambling communities close to newly opened casinos, the National Opinion Research Center—University of Chicago found that unemployment rates, welfare outlays and unemployment insurance declined by about one-seventh.

- *Social and Economic Impacts of Native American Casino*s by William Evans and Julie Topoleski (University of Maryland—2002) details their study that found that four or more years after an Indian casino opens, tribal population increased by 12 percent and employment increased by 26 percent. Over the same period overall regional unemployment had fallen by 9 percent while the fraction of working poor dropped by 15 percent.
- Douglas Clement, writing for the Federal Reserve Bank of Minneapolis in 2003 (*Milking the New Buffalo*) indicates that during the 1990-2000 decade, all reservations in Minnesota increased in population and income as well as decreased in unemployment and poverty. Per capita income changes were 16-19 percent for casino counties and only 4 percent for those without casinos.
- Jonathan Taylor, along with Joseph Kalt and Kenneth Grant of Harvard University in 2002 (*Public Policy Analysis of Indian Gaming in Massachusetts*) estimated that statewide employment in Massachusetts due to a proposed Indian casino would remove approximately 1374 persons from the state's Temporary Assistance to Needy Families (TANF) program and save the state approximately $8.7 million annually. The hypothetical Massachusetts casino is to be equal in size to Foxwoods in Connecticut, and, therefore, it is estimated that the employment of approximately 13,000 workers will generate a reduction in TANF equal to approximately 10.5 percent of the number of workers.

Public assistance costs are reduced, but much less than would be expected:

- Amy Lake and Steven Deller of the University of Wisconsin (*The Socioeconomic Impacts of a Native American Casino*—1996) reported that previous studies of the net economic impacts of gaming operation at the state-level have shown that the industry brings jobs and income and reduces unemployment and welfare (Minnesota Gaming Commission, 1992, Murray, 1993). Yet they further point out that one study from Wisconsin (Deller and Chen, 1994) found that employment trends for the retail and service sectors for casino counties did not differ significantly from non-casino counties.
- The income impact, although positive, is small. Donald Barlett and James Steele report in Time Magazine (December 16, 2002—*Wheel of Misfortune*) that the benefits of Indian casino gambling are very much out of balance. "Revenue from gaming is so lopsided that Indian casinos in five states with almost half the Native American

> population—Montana, Nevada, North Dakota, Oklahoma, and South Dakota...produce the equivalent of about $400 in revenue per Indian. Meanwhile, casinos in California, Connecticut, and Florida—states with only 3 percent of Indian population—haul in...an average of $100,000 per Indian."
>
> Barlett and Steele further add "While federal recognition entitles tribes to a broad range of government benefits, there is no means testing. In 2001, aid to Indians amounted to $9.4 billion, but in many cases more money went to wealthy members of tribes with lucrative casinos than to destitute Indians." Their conclusion, therefore, is that the positive impacts are considerably less than they would be if the benefits were spread more evenly.

In Tasks 1-4, it was estimated that $60.2 million (86 percent) of the estimated wage benefits would be new to Calexico and that an additional $3.5 million would be spent within the county on other goods and services annually. Translating these same proportions to employees, it has been estimated that the number of new Imperial County-based employees at the Calexico casino and its suppliers will be approximately 1,926. Factoring in a Multiplier of 1.75 yields a total number of new jobs equal to approximately 3,370 (See Table 6 in Tasks 1-4 section). Using the Massachusetts example, it is possible to estimate that approximately 335 persons could be removed from TANF (modified below for the effect of jobs going to Mexicali residents).

Utilizing the other data that show income increasing by 15 to 38 percent and unemployment declining by 9 to 32 percent, it is possible to make further estimates about the beneficial impacts of the Calexico Indian casino upon Imperial County public assistance programs. In 2004, unemployment in Imperial County varied from 10,000 persons (17 percent of the labor force) to over 17,000 (28 percent) depending upon the time of the year because of the large proportion of agricultural workers. The smallest number (10,000) might be considered to be the permanent component of the unemployed population. These individuals are often very low skilled and frequently troubled by alcoholism and drug dependency. Therefore, Imperial County is not likely to enjoy the upper end of the range of declining unemployment—many workers will likely be imported into the region and Imperial County will more likely experience the lower end of the potential unemployment decrease (9 percent). Further, some local jobs will accrue to Mexicali residents, indicating that approximately 600 individuals (9 percent of 10,000 = 900 less 300 Mexicali workers according to Tasks 1-4) will be removed from the unemployment rolls because of the net new casino, supplier, and spin-off jobs (18 percent of all net new employees, including the Multiplier) of whom 225 can be expected to no longer need the TANF program—the 225 being the potential 335 reduced by the effect of one-third of local employees being Mexicali residents..

Table 9 shows the most recent final full-year data pertaining to size of the labor pool and number of unemployed workers in Imperial County and its three largest cities. The county's annualized 2004 results show a mean 21.7 percent rate of unemployment, but 2004 results are not yet available for each of these cities. The county is troubled by very high unemployment including much seasonality impacts in the agricultural sector. By far, the most problematic of the three cities is Calexico.

Table 9

Imperial County Labor Force Data
2003 Annual Average

Area	Labor Force	Employed	Unemployed	Rate
Imperial County	57,300	46,200	11,100	19.4%
Brawley-city	10,360	8,300	2,060	19.9%
Calexico-city	9,110	6,710	2,400	26.3%
El Centro-city	17,430	14,160	3,270	18.8%

Source: Calmis, California Employment Development Department (2004) *Labor Force Data for Sub-County Areas,* www.calmis.ca.gov.

Calexico and Imperial County do have a vast supply of available workers who are very low skilled and frequently troubled by drug and alcohol problems that cause them to be poor candidates for employment. In order to take maximum advantage of the 3370 net new permanent full-time jobs to be created in the region, training programs will be vital in not only skills but in behavioral issues, including addiction problems. The opportunity is substantial to make significant inroads into what have been long standing and enormous unemployment, skills, and behavioral deficiencies within the local labor force in Imperial County, generally, and Calexico, in particular.

Task 11: Health and Quality of Life for Senior Citizens:

Senior citizens are seen as an important constituency by many casinos. Individuals at this time in their lives have the disposal income and time to spend. The impact of gambling as a major activity for seniors is highly contentious. Proponents state that gambling is an enjoyable recreational diversion, that those who participate are adults, and that the casinos generally provide special treatment to their senior clientele.

Opponents point to the problems that can arise for those individuals who have an addiction to gambling. In this sense, gambling is equated to other addictions such as alcohol or drugs and has the same social costs. Problem gamblers will have difficulties contributing to their families monetarily and emotionally, thereby creating social problems for the whole community. Senior gamblers who are living on fixed incomes might have a more difficult time recovering from an addiction to gaming than younger gamblers because it is more difficult (if not impossible) for seniors to increase their incomes over time. Further, they might deny themselves needed medications and nutrition at that time of life when they are most in need.

There is a remarkable paucity of rigorous studies concerning senior gambling problems. Many anecdotal accounts are available, but little scientifically derived data. Some of the better statistical studies are from Canada:

- Focal Research Consultants from Halifax, Nova Scotia in a 2002 study for the New Brunswick Department of Health and Wellness surveyed 1,000 seniors (defined as age 55 and older) living in 685 randomly selected households and identified that
    - 83 percent of seniors have participated in gambling activities—74 percent within the past 12 months and 49 percent monthly
    - Lottery draws are the most popular form of gambling (43 percent participation), lottery tickets (13 percent), and bingo (8 percent)
    - Three times as many seniors indicated that they play slot machines at casinos compared to New Brunswick adults in general
    - Among all seniors, the mean number of gambling activities per year is 1.5. It is 2.0 for those who have gambled in the past year.
    - Seniors spend an average of $284.49 (Canadian) annually on gambling—regular gamblers $558.80.
    - 3 percent of all seniors are at any risk for problem gambling (1 percent high risk)—4 percent for those who have gambled in the past year—5 percent for regular gamblers. "These rates are lower than that noted for adults in general in New Brunswick."
    - Younger seniors gamble more than older seniors and are, therefore, more at risk
    - Higher education is related to less gambling
    - The odds of regular gambling by seniors is significantly higher for males

- Windsor Regional Problem Gambling Services (Windsor, Ontario) in 2001 reported that slot machines were the primary cause of problem gambling (59 percent). The mean age of problem gamblers is 39.2 years of age, but 14 percent of problem gamblers were retired or disabled. It is noteworthy that 13 percent of the 2003 population of the province of Ontario is age 65 and over and 12 percent of Windsor's 2001 population was 65 and over. These percentages match the proportionate rate of problem gamblers for this age group and indicate no problems in the senior population that are distinct from the total population.
- The Alberta Alcohol and Drug Abuse Commission in 2000 found that 32 percent of Alberta seniors do not gamble at all, 66 percent are non-problem gamblers, and 2 percent are problem gamblers. Less than 1 percent (0.4) are probable pathological gamblers.

United States based studies also contribute some important statistical data:

- The Task Force on Gambling Problems of the Elderly--National Council on Problem Gambling's 2003 *Issue Brief on Senior Gambling and Problem Gambling* states that "In 2002, the U.S. legal gambling revenue was approximately 62 billion. Approximately 65 percent of Americans gambled at least once in the past year....Americans lose more money gambling than they spend on movie tickets, theme parks, spectator sports and video games combined. Yet very little has been done to research the overall impact of this massive influence on American social and economic life, particularly on seniors."

  This study identified that:
  - The proportion of seniors who recently gambled jumped from 20 percent in 1974 to 50 percent in 1998, "a surge unmatched by any other age group."
  - Calls from seniors to problem gambling help lines in seven states (Arizona, California, Connecticut, Delaware, Florida, Louisiana, and New Jersey [casino states]) have increased. All states reported that a significant number of calls came from seniors (6 to 33 percent among these states)
- Thor Carlson, editor of the Good Age Newspaper of the Amherst H. Wilde Foundation, in Studies Reveal Misperceptions About Seniors' Gambling Habits quoted Kelly Reynolds of the Minnesota Gambling Resources Center as saying "Among the adult population, about 1 to 3 percent is prone to compulsive gambling. Through our informal research, the rate among seniors probably falls within that range." Roger Svendson, director of the Center reported: "We get fewer calls on the helpline from seniors and young people that any other age group and I think we are seeing fewer of them in treatment centers."

  Linda Havir of St. Cloud State College (Minnesota) and Janet Hope of the College of St. Benedict (Minnesota) did a survey of 143 clients at the St. Cloud, Minnesota community senior center and concluded that "the most surprising thing we found was that few people seemed to be at risk of negative gambling habits."

- David Strow in the July 31, 2000 Las Vegas Sun (*LV Seniors Vulnerable to Gambling Addiction*) reported that UNLV professor Fred Preston found that nearly 60 percent of Clark County residents older than 55 gambles and that 30 percent do so at least once per week. Nearly one in four seniors surveyed said that one reason that they moved to Las Vegas was the opportunity to gamble and that 25 percent of them called gambling a "significant part of their recreational activity."

Approximately 2 percent of all seniors surveyed by phone showed signs of current problem gambling, while another 2 percent had indications of pathological gambling. "Just under 3 percent of seniors had problems with gambling at some point in their lives while another 2.4 percent had signs of pathological gambling in the past."

Another survey by UNLV's Howard Cannon Center for Survey Research interviewed 449 local residents age 55 and older and found that "The numbers may similar to other segments of the population, but that is not a reason for complacency."

- *Gambling at Any Age* in The Wager: Weekly Addiction Gambling Report of the Harvard Medical School and Massachusetts Council on Compulsive Gambling (June 2002) agreed that senior gambling is growing—"Between 1975 and 1999, the number of individuals over 65 reporting gambling in their lifetimes swelled from 35 percent to 80 percent" but that research pertaining to pathological gambling among the elderly is just beginning to emerge."

  This report cited a study by Nancy Petry in The Gerontologist (2002). Petry recruited 343 individuals who had been admitted into two Connecticut gambling treatment programs between 1998 and 2000 and administered to them the Addiction Severity Index assessment test at intake. The oldest group (age 55 and over) was 55 percent women. These women started gambling at age 42 on average, whereas the men started at 21. Regular gambling started for the men at age 33 and for women, it was 55. The median amount of their monthly income that was gambled was 187 percent for men and 249 percent for women. Although this study is limited to individuals already probably pathologically addicted to gambling, it does show that women start later but seem to be much more in danger of this addiction than are men in that they gamble more of their income than do men.

- In Philadelphia, researchers from the University of Pennsylvania and the Pennsylvania State College of Medicine recently published a study in the American Journal of Geriatric Psychiatry. This study (*Gambling Among Older, Primary-Care Patients: An Important Public Health Concern* by Suzi Levens, Anne-Marie Dyer, Cynthia Zubritsky, Kathryn Knott, and David W. Oslin) published in January of 2005, indicates that even though gambling provides a diversion for seniors, it can put them at risk if they wager more than they can afford.

  This study conducted a random sample of 843 senior citizens, 65 or older, at primary care facilities in Philadelphia. One-half of those randomly asked to participate agreed to be part of the study. From those who responded to the questionnaire, 70 percent reported that they had gambled at least once in the past year. Almost 11 percent indicated that they had bet $100 or more on a single bet and/or had placed a bet for more than they could afford to lose. These individuals were identified as at-risk gamblers. These individuals also were found to suffer from other addictions such as binge drinking, had posttraumatic stress disorder, were of a minority race or ethnicity, or were a Veterans Administration patient. The researchers believe that these characteristics can be used as predictors to identify individuals that might be at-risk.

  The primary conclusions of the study were that gambling might pose a serious public health concern, especially for senior citizens but additional research still needs to be conducted to ascertain the social, health, and economic costs to the nation from this activity.

Finally, a study of senior gambling in Detroit found that those most at risk "were from lower income, lacked 'senior optimism,' had mental health problems and had little social support" (Becky Yerek, *Casinos Draw One-in-Three Seniors*, The Detroit News, 2003). This clearly is the risk group but it is not clear, how many seniors in Calexico fit into this category. It is known, however, that many of Calexico's seniors have low, fixed incomes.

A strong social support system exists in Calexico. The city funds a community center that provides many activities and events for Calexico's senior citizens. Family is an important part of the Calexico community, providing a strong support system for senior citizens. These would tend to help Calexico seniors be less inclined toward become problem gamblers.

Most studies that have some statistical basis, in contrast to anecdotes, indicate that the majority of senior gamblers do not have more of a problem with compulsive gambling than does the general population at large that has demonstrated a 1 to 6 percent rate of problem gamblers depending upon the study and severity of the measure used to identify the disorder. Other than the American Journal of Geriatric Psychiatry study, discussed above, about Philadelphia seniors who had 11 percent identified as "at risk" of problem gambling, these percentages hold for seniors also.

Seniors clearly find gambling to be a highly enjoyable activity, so much so that many Las Vegas seniors (25 percent) moved there, in part, because of the availability of casino gambling. This factor may also contribute to the higher numbers from Philadelphia, which is very close to Atlantic City. Most seniors indicate that entertainment is their main reason for gambling and not the desire to win money. Ron Karpin, head of the New Jersey Council on Compulsive Gambling is quoted in the April 19, 2001 Christian Science Monitor (*Growth of Retiree Gambling Raises Stakes*) as saying "There's no question senior gambling is on the rise. They're the fastest growing segment of the population, they're more affluent than ever and...they're bored."

Although not out of proportion to their population size, that percentage of seniors, whatever the actual proportion, who might have gambling problems, should not be ignored. Seniors are less resilient than the general population in that they are more often living on limited and fixed incomes and have health needs that can impose significant costs upon that income. They, therefore, may be less able to afford the gambling losses than is the general population.

What exists, therefore, is a mixed finding. First, seniors appear to be not significantly different and no more susceptible than the general public to compulsive gambling, which has already been discussed in this report as a problem that is not of an abnormally large magnitude. On the other hand, the unique needs of the senior population make whatever difficulties do exist more problematic.